in Chithmetic

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GRADE -

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THE

TEACHER

The revised PROGRESS IN ARITHMETIC, Grade Three, aims to maintain the high standard of the earlier edition, for the original form has been substantially retained. The author, ever alert for new ideas, has endeavored to vitalize and enrich the program in order to meet the needs of the child in our constantly changing world. The teaching of arithmetic must begin early in the school program, for it influences the child's thought and activity not only during his formative years but also in his later life.

In the first and second grades the young pupil has developed an understanding of numbers and number relationships through concrete meaningful experiences. He has likewise acquired specific ideas and skills which enable him to meet the challenge of the third grade, the transitional year. Thus the new PROGRESS IN ARITH-METIC, Grade Three, is an extension of the basic fundamentals taught in the first two books of the series, and it paves the way for the presentation of arithmetic in subsequent grades. The author has taken nothing for granted. Ample provision is made for review or reteaching of topics introduced in the preceding grades. The program of instruction offered in this book has been tested and found satisfactory in many schools throughout the nation.

OBJECTIVES. The revised program has for its objectives:

- 1. to develop the child's understanding of numbers so that he will attain a certain degree of insight into the significance of what he does;
- 2. to fix for retention what the pupil has learned;
- 3. to provide training in problem-solving at third grade level.

VISUAL AIDS. In any arithmetic program the use of visual aids, especially in the lower grades, cannot be overemphasized. PROGRESS IN ARITHMETIC offers plentiful opportunities for the same in the concrete presentation which precedes the textbook development. Suggestions regarding these are made in the Teacher's Manual, which accompanies the text.

PROCEDURES. It is very important that the child have an understanding of numbers before he be asked to memorize abstract facts. This understanding can be brought about chiefly through the use of concrete manipulative ob-

jects and also by the use of the visual, the auditory, and the muscular powers of the child.

The Teacher's Manual gives detailed lesson plans for the presentation of each topic. Thus in teaching addition, subtraction, multiplication, or division facts, the techniques to be employed may be summed up as follows:

- 1. Develop the meaning of the number fact by the use of concrete movable objects.
- 2. Further develop this meaning by the use of objects on the flannel board.
- 3. Show the same fact in attractive pictures.
- 4. Illustrate the fact in various ways on the chalkboard.
- Have the children at their desks arrange counters in groups to show the facts.
- Let children illustrate the fact at the flannel board or at the chalkboard.
- 7. Give simple little problems to apply the fact in life-like situations.
- 8. Have children formulate similar problems.

With such preparation the pupil is ready to appreciate and comprehend the lessons in the text. The brightly colored illustrations give him abundant practice in visual discrimination. He will find the sentence structure simple and the vocabulary less difficult than that used in the average third grade reader.

DRILL EXERCISES. The concrete approach should continue only while the child requires it. As soon as he has grasped the meaning of the fact being taught, then he is ready for the memorization of the abstract fact. The text contains daily drill exercises which enable him to retain what he has learned. Interest is enhanced by the

singing of little songs and by playing games, as suggested in the Manual.

PROBLEM SOLVING. Problem solving is an important phase of the work of the third grade. A definite plan for solving problems is offered and the child is taught how to proceed step by step. A careful selection of problems has been made. They present situations that are interesting to children and within their everyday experiences. Appeal has been made to hobbies and games of children and to the happenings in the community in which they live.

MENTAL EXERCISES. Simple mental problems are introduced in third grade. They are arranged in groups of five problems, and each group is geared to keep pace with topics as they are presented throughout the book. The problems are offered as an integral part of each day's lesson and claim as their purpose the mental growth of the child and his attainment of a degree of efficiency in problem solving.

TESTS. The book contains a number of tests which serve to measure the child's achievement in computation and in problem solving. By means of these varied tests the teacher knows wherein lies the strength and the weakness of each pupil as well as his rate of progress. Both teacher and pupil will experience the value of the testing program provided.

INDIVIDUAL DIFFERENCES. In addition to the work assigned for the average and below average pupil, an entire unit is included as a challenge for the more than average pupils. This is the last unit in the book so that it can be conveniently omitted if the teacher so desires.

A COMPLETE

MANUAL AND KEY

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Jesus, Child of Nazareth,

Please bless the task I do.

The work of every single page
I offer, Lord, to you.

1

UNIT ONE:

REVIEW OF ADDITION AND SUBTRACTION

LOOKING BACK

These pages review what you learned in First and Second Grade. Master them and you will be on the road to success.

Tell how many there are in all:

/ apple and 4 apples

/ hat and 2 hats

 $\boldsymbol{3}$ balls and $\boldsymbol{2}$ balls

2 boys and 2 boys

3 trees and / tree

2 ducks and / duck

Remember

To find out how many there are in all, we add.

Add the numbers in each of these examples:

Look at the bottom number first. Then look at the top number.

2 angels +3 angels

/ boat +2 boats

2 dolls +2 dolls

3 drums +/ drum

toys + / toy

/ flag +4 flags

? angels

? boats

? dolls

? drums

? toys

? flags

Tell how many are left:



5 birds were in a tree

/ flew away

2



? were left.

Remember

To find out how many are left, we subtract.

Subtract the numbers in each of these examples:

5 cars

wagons -/ wagon -2 trucks -3 books

trucks 5 books

balls -3 balls 3 cups / cup

Read these problems and give the answers:

/. At the farm John saw 3 old horses and 2 young horses. How many horses did John see?

2. There were 4 books on the table. Sister gave 2 books to a girl. How many books were left?

2

EASY NUMBERS TO ADD AND SUBTRACT

Copy each of these examples and do what the sign tells you to do.

Here is another way to write a subtraction example. 5-3=2 Say, "Five minus three equals two."

Read each of these examples aloud and say the remainder.

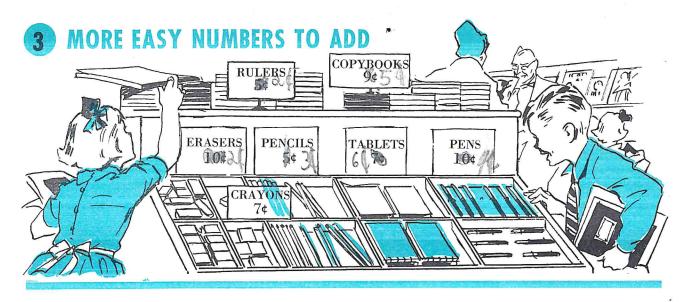
Then copy each one and write the remainder:

Tell the missing number to complete each addition or subtraction fact.

Read these problems and give the answers:

/. Paul had **2** red balloons and **3** yellow balloons. How many balloons had he altogether?

2. 5 boys were playing in the school yard.2 boys went home. How many boys were left?



Can you add these numbers quickly? Say the answers for your teacher first. Then copy the examples and write the sums. Move the / to the left for /0.

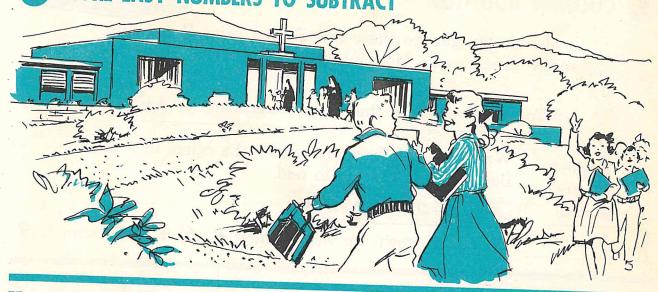
Use the picture above to find your answers.

/. If Tom buys a pen and a pencil, how much will both cost?

 $\frac{4}{7}$ cents cents

- 2. Ann buys a copybook and an eraser. How much will they cost?
- 3. John bought a ruler and a tablet. How much did he pay for both?
- 4. If Molly buys crayons and a pencil, how much will they cost?
- 5. Jack bought crayons and a ruler. How much did he pay for them?
- 6. How much will Betty pay for a pen and a copybook?

MORE EASY NUMBERS TO SUBTRACT



Here are some examples in subtraction. How fast can you say the answers?

Use the picture above to find how much money the children had left.

/ Jane had a dime. She bought a pencil. How much had she left?

10 cents -3 cents 7 cents

- 2. Joe had 8 cents. He bought a ruler. How much had he left?
- 3. Dick had 6 cents. He bought a pen. How much had he left?
- 4. Mary had 9 cents. She bought a tablet. She had? cents left.
- 5. Bob had 10 cents. He bought a copybook. How much had he left?
- 5. Susan had 7 cents. She bought a pen. How much had she left?

5 COLUMN ADDITION



In John's toy garage there are 3 blue cars, 2 red cars, and 4 green cars. How many cars are there altogether?

To find how many there are altogether, we add.

3 cars 2 cars +4 cars 9 cars Write the numbers one under the other in a column. Begin at the bottom to add.

Add: 4+2=6 6+3=9

This is a grown up way to add: 4, 6, 9. The sum is 9.

Copy these examples. Add and write the sums. Begin at the bottom to add.

4 // 2	3 2 1	4 2 2	3 / 3	3	3 2	# 73 2 	2 4 —	2 3	3 2 2 —
5 /	2 5 2	2 / 3	# # 	5 .3 /	3 2 3 —	5 / 4	3 / 4	<i>4 5 1</i>	5 3 2
2 2 4	/ 3	3 4 2	3 2 5	2 5 1	<i>1 4 3</i>	2 3 4	5 2 2 —	2 3 2	2 3 /

Work these problems. Follow the instructions at the top of the page.

- The children were looking for shells on the beach. Peter found 3 shells, Tom found 5 shells, and Francis found / shell. How many did they find altogether?
- The mailman brought # letters for Father, 3 letters for Mother, and 2 letters for Helen. How many letters did he bring in all?
 - 3. At the candy store Mary bought 2 taffies, Rose bought / taffy, and Donald bought 6 taffies. How many taffies did they buy in all?

NUMBER CHART

0	10	20	30	40	50	60	70	90	00	
1	11	21	3/	41	51			80	90	100
2	12					61	7/	81	91	101
		22	32	42	52	62	72	82	92	102
3	13	23	33	43	53	63	73	83	93	1111
4	14	24	34	44	54	64	-	ALC: CONTRACT		103
5	15	25	35				74	84	94	104
				45	55	65	75	85	95	105
6	16	26	36	46	56	66	76	86	96	
7	17	27	37	47	57	67				106
8	18	28	38				77	87	97	107
				48	58	68	78	88	98	108
9	19	29	39	49	59	69	79	89	99	109

Count

by 5's: by 3's:

by 4's:

from 5 to 60

from 3 to 36

from 4 to 48

from 55 to 95

from 18 to 39 from 24 to 60

from 65 to 100

from 12 to 33 from 16 to 40

Say the numbers that are missing:

1, 3, ?, 7

36, 33, ?, 27 50, ?, 40, 35

9, 11, ?, 15 12, ?, 6, 3

25, 20, ?, 10

17, ?, 21, 23

21, ?, 15, 12 30, 25, ?, 15

Tell the number that comes after:

7 ?;

18 ?;

23

?; **73** ?; **95**

What number is before?

? 9;

? 12;

? 17:

59;

88:

What number comes between?

? 10;

22

? 24:

45

? 47;

Which number is larger?

or 9

7 or 15

13 or 23

36 or 63

18 or 80

Vhich number is smaller?

or 70 18 or 81 15 or 25 10 or 100

50 or 60

PLACE VALUE OF NUMBERS

If you want to know how to read and write large numbers, you must learn something about the value of each place in a number.

Here are 10 sticks.

When we tie them together we have / ten-bundle.



Here are 20 sticks.

When we tie them together we have 2 ten-bundles.



Tell the answers:

In // there is / ten and / unit.

In 12 there is ? ten and ? units.

In 13 there is ? ten and ? units.

In /4 there is ? ten and ? units.

In 23 there are? tens and? units.

In 27 there are ? tens and ? units.

In 25 there are? tens and? units.

In 22 there are? tens and? units.

Give the answers:

/ ten and 5 units=/5

2 tens and 8 units=?

2 tens and 0 units=?

3 tens and 8 units=?

tens and # units=?

5 tens and 3 units = ?

6 tens and 7 units=?

7 tens and 9 units=?

8 tens and 6 units=?

9 tens and / unit = ?

/0 tens and 0 units=?

16 means 1 ten and 6 units.

19 means ? ten and ? units.

24 means ? tens and ? units.

26 means ? tens and ? units.

30 means ? tens and ? units.

9/ means ? tens and ? unit.

48 means ? tens and ? units.

73 means ? tens and ? units.

55 means ? tens and ? units.

82 means ? tens and ? units.

/00 means ? tens and ? units.

Learn to count money. Test yourself and say the answers:

// is / ten and / unit.

// cents is / dime and / cent.

24 is ? tens and ? units.

24 cents is ? dimes and ? cents.

49 is ? tens and ? units.

49 cents is ? dimes and ? cents

60 is ? tens and ? units.

60 cents is ? dimes and ? cents

8 PLACE VALUE OF NUMBERS (CONTINUED)

//4 means

/ hundred / ten and 4 units.







32/ means

3 hundreds 2 tens and / unit.

405 means

4 hundreds 0 tens and 5 units.

Say the answers:

057		hundreds	tens	units		hundreds	tong	unita
25/	means	2	2	0	200	ranar cub	16119	units
				• '	<i>380</i> means	2	2	9
364	means	9	9	0		• 0_0	•	
		•		?	206 means	2	9	0
475	means	9	0			•	•	
	means	•	?	?	590 means	2	2	9
	à			the state of the s	- , - incaris	:		

Write the figures for:

Two hundred twenty-four. Three hundred sixty-five. Four hundred fifty. One hundred seventy-one. Two hundred forty-three. Five hundred thirty.

Read these numbers and tell what each figure means:

10-		The state of the s			_		~.		
<i>635</i> ; <i>609</i> ;	704; 715;	908; 412;	<i>520</i> ; <i>690</i> :	<i>372</i> ; <i>974</i> :	261; 209;	987;	428;	632;	840
				, , ,	~ , ,	0,0	700,	291;	103

Write the number that means:

2 hundreds, 6 tens, 5 units
4 hundreds, 7 tens, 8 units
2 hundreds, 5 tens, 6 units
2 hundreds, 5 tens, 6 units

Write in words. Do it like this: 275 two hundred seventy-five 384; 496; 562: 153

Write the number that comes after:

282; 376; 485; 564; 691; 381; 475; 390; 570; 663

Write the number that is before:

265; 384; 506; 458; 661; 371; 493; 289; 581

What number is between?

175 ? 177 | 293 ? 295 | 368 ? 370 | 599 ? 601 206 ? 208 | 375 ? 377 | 489 ? 491 | 570 ? 572

9 ZEROS IN ADDITION



When zero is added to a number, the number is not changed.

When a number is added to zero, the number is not changed.



Say quickly the answers to these examples:

4+**0**=?

Add and give the sums:

Copy these examples and add. Be careful in writing the answer when the sum is 10.

6 4 8 5 2 3 1 7 4 6

3

2 5 3

0

4

10 ADDING UNITS AND TENS



The Cub Scouts went on a hike.

22 boys walked with Mr. Kane and 34 boys marched with Mr. Gay. How many Cub Scouts were there in the party?

Add the units. 4 and 2 are 6. Write 6 under 4. Add the tens. 3 and 2 are 5. Write 5 under 3. The sum is **56**.

Copy and add. Remember to write units under units, and tens under tens

24	35 21	46	2/	32	43	54 12	65 //	87 /2
72	45 24	34 52	12	65	17 52	82 17	14	77 22

Add the units. 15 Say: "1, 3, 8." 32 Add the tens. Say: "4, 7, 8." +41 88 The sum is 88

Add these the grown up way.

26 12 61	33 20 46	53 14 20	/2 20 57	53 34
7 7	-	20	37	10

In each of these examples the sum is more than 99. Write each figure in the sum in its correct place:

98	73 34	62 46	54 52	63 45	85 24	70 36	56 52	29	44
82	75	68	55	43	35	47	26	51	23
10	24	20	42	30	44	51	40	18	51
17	10	20	12	35	30	10	43	40	35

ZEROS IN SUBTRACTION



When zero is taken from a number, the number is not changed. When a number is subtracted from itself, the answer is zero.



Say quickly the answers to these examples:

5-0=?

6-0=?

Subtract and give the remainders:

Tell the missing number to complete each addition or subtraction fact.

Copy these examples and do what the signs tell you to do.

Write the sums or the remainders:

5

12

SUBTRACTING UNITS AND TENS

There were 48 eggs in the basket.

Mother took 20 eggs from the basket.

How many eggs were left?



To find out how many are left, we subtract.

48 eggs Subtract the units. 0 from 8 equals 8. Write 8 under 0. -20 eggs Subtract the tens. 2 from 4 equals 2. Write 2 under 2.

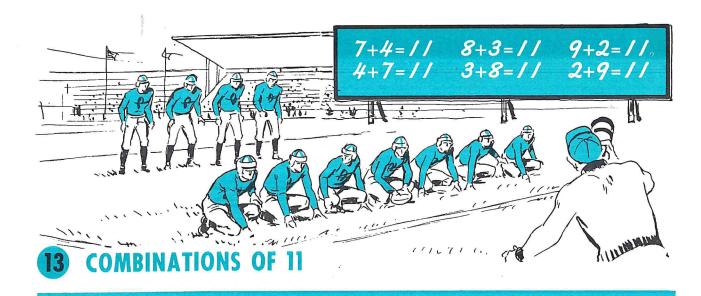
28 eggs The remainder is 28. 28 eggs were left.

Copy these examples. Subtract and write the remainders.

Remember to write units under units and tens under tens.

Subtract the numbers in each of these problems and give the remainders:

- / Mother baked 48 cookies for the party. The children ate 36 cookies. How many cookies were left?
- 2. The milkman had 76 quarts of milk on his truck. He sold 52 quarts of milk. How many quarts of milk did he have left?
- 3. John had 36 marbles. He gave 20 marbles to Fred. How many marbles did he have left?



Use the counters on your desk to show these facts. Then say the answers without using the counters.

Can you do these problems?

/. On the field there are 7 men and 4 men. How many men are there on the field?

- 7 men +4 men ? men
- 2. There are 8 men sitting on the bench and 3 men standing near the bench. How many men are there?
- 3. There are // men on the field. 7 of them are in front. How many are behind them?
- 4. There are // men watching the game. 3 do not have hats. How many have hats?
- 5. // men were on the bench. 2 were called into play. How many men were left on the bench?
- 6. Our team won 9 games and lost 2 games. How many games did the team play?

ADDING BY ENDINGS

There were 22 cookies in the box. Mother put 3 more cookies into the box. How many cookies were in the box then?

An easy way to find the answer is to THINK.

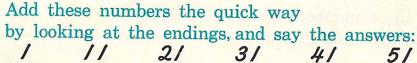
$$\begin{array}{ccc}
 2 & 22 \\
 +3 & +3 \\
 \hline
 5 & 25
\end{array}$$



This quick way to add numbers that end the same way is called adding by endings.

WATCH
YOUR
ENDINGS
(C) 154





42

52

+3

+/

+2

62

+3

+2

72

+3

82

+3

61

25

+/

+2

35

+/

+/

15

+/

15 SUBTRACTING BY ENDINGS



There are **/5** taffies in a box. Sister gave **2** taffies to John. How many taffies were left?

An easy way to find the answer is to THINK.

5	15
-2	-2
3	13

This quick way to subtract numbers is called subtracting by endings.

Subtract these numbers the quick way by looking at the endings, and say the answers:

33

-2

43

13

23 -2

87

- /. Subtract 3 from each of these numbers: 8, /8, 28, 38, 48, 58, 68, 78
- 2. Subtract 7 from each of these numbers: 9, 19, 29, 39, 49, 59, 69, 79
- 3. Subtract 6 from each of these numbers: 8, 18, 28, 38, 48, 58, 68, 78

16 COMBINATIONS OF 12

Say the answers:

Oral problems. Tell the answer:

- /. There are 5 Cub Scouts in our class and 7 in another. How many Cub Scouts are there?
- 2. The Cubs walked 8 miles one day and 4 miles another day. How many miles did they walk?
- 3. One Cub has 9 flags. Another Cub has 3 flags. How many flags do they have?
- 4. At camp the Cubs had 12 tents. They took 9 of them down. How many tents were left?
- 5. The Cubs had 12 logs. They used 8 of them for the fire. How many were left?
- 6. The Cubs made /2 sandwiches. 7 of the sandwiches were ham and the others were cheese. How many cheese sandwiches were there?

17 PROBLEMS IN COLUMN ADDITION

The Cub Scouts had a toy drive for the children of Saint Joseph's Home. Add the numbers in these problems about the toys they collected.

Be sure to write each number directly under the other.



- /. For the girls the Scouts donated 7 baby dolls, 3 bride dolls, and 2 Sister dolls. How many dolls did they donate in all?
- 2. The little boys had fun with the toy hats the Scouts collected. There were 4 cowboy hats, 5 soldier hats, and 3 clown hats. How many hats were there?
- 3. Tom collected 3 toy airplanes, Bob collected 2 airplanes, and John collected 6 airplanes. How many airplanes did they collect?
- 4. One Cub donated **2** yellow balloons, 4 red balloons, and **6** green balloons. How many balloons did he donate?
- 5. Peter collected 4 footballs, Joseph collected 2 footballs, and David collected5 footballs. How many footballs did they collect?
- 6. Among the toys were 3 fire trucks, 3 mail trucks, and 4 farm trucks. How many trucks were there in all?
- 7. 5 games were for little boys, 4 games were for little girls, and 3 games were for older children. How many games were there?
- 8. They collected 6 books about saints, 3 books about great people, and 3 books about animals. How many books did they collect?

Copy and add the 4 numbers in each of these examples:

11	.3	5	2	/	7	6	3	8	5
2	1	0	7	9	0	/	4	0	3
2	0	Ц	0	Ź	3	0	/	2	2
3	7	2	1	$\tilde{\rho}$	2	5	2	2	7
<u> </u>					2				

COMBINATIONS OF 13



Use o	counters	to show	each fa	ct:					المسك
9+4	# +9	13	13	8 +5	<i>5</i> +8	/3 -5	/3 -8	7 +6	6 +7
13 -6	/3 7	7 +5	5 +7	/2 -7	/2 -5	8 +3	3+8	// -8	// -3
7 +3	3 +7	10 -7	/0 -3	8 +4 —	5 +8	/3 -8	/3 -5	8 +5	9+4
13	13	7+6	13	6+3	9+3	9+2	12 -9	12	<i>4</i> +5

- /. Tom has 9 pencils. Mary has 4 pencils. How many pencils do they have?
- 2. There were 8 boys in the game. 5 more came to play. How many were then in the game?
- 3. Bill has 7 cents. Joseph has 6 cents. How much do they both have?
- 4. Sister had 13 pictures. She gave 6 of them to Jean. How many pictures were left?
- 5. /3 boys are at the blackboard. If 9 of them go to their desks, how many are still at the board?

Subtraction drill. Copy each example and write the remainder:

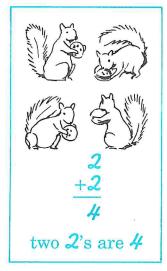
- 86 Subtract the units. 4 from 6 leaves 2. Write 2 in units' column.
- Subtract the tens. 2 from 8 leaves 6. Write 6 in tens' column.
- The remainder is 62.

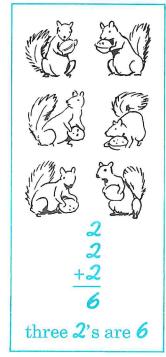
Copy each example, subtract, and write the answer:

1 LEARNING TO MULTIPLY

one 2 is 2 $/\times 2=2$ two 2's are 4 $2\times 2=4$ three 2's are 6 $3\times 2=6$ four 2's are 8 $4\times 2=8$









2+2+2+2 is adding 2 over and over. It is adding 2 four times. A short way of adding the same number over and over is to multiply. When you say four 2's are 8, you are multiplying 2 by 4. Sometimes you write multiplication this way: $4\times2=8$ × is called the times sign. The sign × tells you to multiply. $4\times2=8$ is read, "Four times two equals eight."

Say the answers:

one **2** is ? two **2**'s are?

/×2=?

2×2=?

three 2's are?

four 2's are?

3×2=?

4×2=?

× says "times." It means multiply.

one 2 is 2 two 2's are 4 three 2's are 6

four 2's are 8

five 2's are 10

six 2's are /2

one 2 is 2

two 2's are 4

three 2's are 6

four 2's are 8

five 2's are 10

Six 2's are /2

2	
$1\times2=2$	
	-

$$2\times2=4$$

$$2+2+2=6$$

 $3\times 2=6$

$$4\times2=8$$

$$2+2+2+2+2=10$$

 $5\times 2=10$

$$2+2+2+2+2+2=12$$

 $6\times 2=12$

One 2 is ? Two 2's are? Three 2's are?

Four 2's are?

Five 2's are? Six 2's are?

/x2=?

2×2=?

3×2=? $4 \times 2 = ?$

5×2=?

6×2=?

Three 2's are?

Five 2's are? One 2 is ?

Six 2's are?

Two 2's are? Four 2's are? 3×2=?

5×2=?

/x2=?

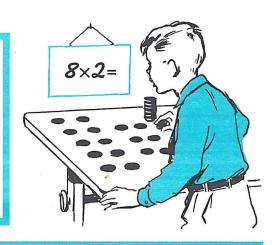
6×2=? 2×2=?

4×2=?

MORE 2'S IN MULTIPLICATION



 $7 \times 2 = 14$ 8×2=16 $9 \times 2 = 18$ 10×2=20 11×2=22 12×2=24



Seven 2's are 14



Eight 2's are 16

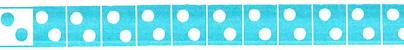


Nine 2's are 18



Ten 2's are 20

Eleven 2's are 22



Twelve 2's are 24

seven 2's are?

2 ×10

2

ten 2's are? 10×2=?

eleven 2's are? //×2=?

twelve 2's are? 12×2=?

Say the answers:

seven 2's are?

eight 2's are?

nine 2's are?

 $7 \times 2 = ?$

8×2=?

9×2=?

ten 2's are?

eleven 2's are?

twelve 2's are?

10×2=?

 $7 \times 2 = ?$

8×2=?

 $9 \times 2 = ?$

eight 2's are?

nine 2's are?

//×2=?

12×2=?

4

PROBLEMS USING THE TABLE OF TWO'S

David has his toy soldiers on parade. If there are 2 soldiers in each row, how many soldiers are there in 6 rows?



We can find the answer by adding. A shorter way to find the answer is to multiply.

$$2+2+2+2+2+2=12$$

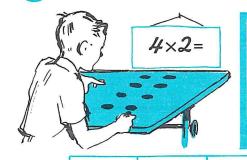
 $6\times 2=12$

Show that to multiply is a short way to add.

Use the table of 2's to find the answers to these problems:

- /. Every day Mary eats 2 cookies. How many cookies does she eat in 7 days?
- 2. The girls made dresses for their dolls. If each girl made 2 dresses, how many dresses did 8 girls make?
- 3. After school 4 boys helped Sister. If she gave each boy 2 cookies, how many cookies did Sister give away altogether?
- 4. Anne put 5 plates on the table. She put 2 sandwiches on each plate. How many sandwiches did she put on all the plates?
- 5. 2 gloves make a pair. How many gloves are there in 3 pairs?
- 6. If each pupil brought 2 leaves for the Science Club, how many leaves did 10 pupils bring?
- 7. Joan drinks 2 glasses of milk each day. How many glasses of milk does she drink in 9 days?
- 8. Ellen made 2 birthday cards and drew 2 flowers on each card. How many flowers did she draw?

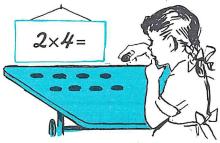
5 MULTIPLICATION FACTS IN PAIRS



Four 2's are 8
Two 4's are 8

4×2=8

2×4=8



Five 2's are 10 $5 \times 2 = 10$

/0 2 =/0 ×5

Two **5**'s are **10** $2 \times 5 = 10$

 $2\times5=/0$ $\times2$

 4×2 and 2×4 are a pair of multiplication facts. 5×2 and 2×5 are a pair of multiplication facts.

4×**2**=? **2**×**4**=?

 $5\times2=?$ $2\times5=?$

Copy and finish each pair of multiplication facts:

$6 \times 2 = 12$ $7 \times 2 = 2$	9×2=?	/0×2=?
$2 \times 6 = 12$ $2 \times ? = 2$	2×? = 18	2×? =20

 1×2=?
 3×2=?
 1/×2=?
 4×2=?

 2×? = 2
 2×? = 24
 2×? = 18

Use counters on your desks to show these facts:

					v
3×2	2× /	4× 2	?×2=18	?× 2 = 8	2×?=/6
5×2	2× 6	7× 2	?×2=14	?× 2 = 2	2×?=/2
9×2	2×//	10× 2	?×2=10	?× 2 = 6	2×?=22
12×2	2× 4	2× 3	?×2=24	2× ?= 18	2× ?= 8
8×2	2× 7	2× 5	?× 2 = 20	2× ?= 14	2×?= 2
/×2	2×10	2× 9	?× 2 = /6	2× ?=/0	2×?= 6
6×2	2× ·2	2×12	?×2=12	2× ?=24	?× 2 = 24
11×2	2× 5	2× 8	?×2=22	2×?=20	?×2=18

6

MORE MULTIPLICATION FACTS

Say the answers:

/x2=?

2×2=?

3×2=?

4×2=?

5×2=?

6×2=?

 $7 \times 2 = ?$

8×2=?

9×2=?

10×2=?

//×2=?

12×2=?

One 2 = ?

Two 2's=?

Three 2's=?

Four 2's=?

Five $2'_{s=?}$

Six $2'_{S}=?$

Seven $2'_{S}=?$

Eight 2's=?

Nine 2's=?

Ten 2's=?

Eleven 2's=?

Twelve 2's=?

In **2** there is ? **2**

In 4 there are ? 2's

In 6 there are ? 2's

In 8 there are ? 2's

In /0 there are ? 2's

In /2 there are ? 2's

In /4 there are ? 2's

In /6 there are ? 2's

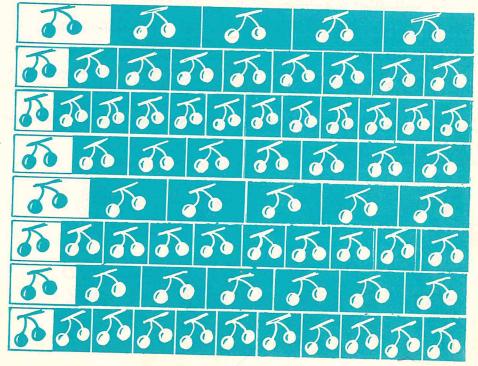
In /8 there are ? 2's

In **20** there are ? **2**'s

In **22** there are ? **2**'s

In 24 there are ? 2's

What do these pictures show?



LEARNING TO DIVIDE

Mother makes 12 cakes. 💮 💮 💮 💮

She puts them in 2's.













How many 2's are there?

In 12 there are six 2's.

When you find how many 2's there are in 12, you are dividing.

You are dividing 12 into 2's.

You show there are six 2's in 12 in this way:

How many 2's are there in 12? Into how many 2's can /2 be divided? What is 12 divided by 2?

When you see $2\sqrt{12}$ you think, "How many 2's in 12?"

What do you think when you see:

2/12

2 20

2/18

You can prove your answer is correct in this way:

How many 2's in /2?

6, because.

 $\sin 2$'s are 12.

How many 2's in 4?

7, because

seven 2's are 14.

Prove that these answers are correct:



2'S IN DIVISION



Billy has 8 tops.

He groups them in 2's.

How many 2's has he? Billy has four 2's.

This shows that in 8 there are four 2's.



Say these aloud. Then copy and write the answers:

Sometimes we write division this way: $/2 \div 2 = 6$

÷ is called a division sign. The sign ÷ tells you to divide.

 $/2 \div 2 = 6$ is read, "Twelve divided by two equals six."

tudy the division table of 2's.

$$\div 2 = 1$$
 $10 \div 2 = 5$ $18 \div 2 = 9$ $\div 2 = 2$ $12 \div 2 = 6$ $20 \cdot 2 = 10$

$$14 \div 2 = 7$$

Say the answers aloud:

12÷2

4÷2

st yourself:

 $\div 2=3$

 $\div 2 = 4$

ONE-HALF OF A GROUP

Mother has 6 cookies. She gives one-half of them to Patsy and the other half to Nan. How many does she give to each?

> When we find one-half of a number, we divide the number into 2 equal parts.

Mother divides the six cookies into 2 equal groups. Each of the equal groups is called one-half.





Patsy has? cookies.

Nan has? cookies.

We may write one-half this way $\frac{1}{2}$.

$$\frac{1}{2}$$
 of 6 means $6 \div 2$

$$\frac{1}{2}$$
 of **6**=**3**

Alice has 10 cents and gives $\frac{1}{2}$ to Jane.

 $\frac{1}{2}$ of 10 cents is 5 cents.





to find $\frac{1}{2}$ of a number, divide the number by 2

Tell the answer:

$$\frac{1}{2}$$
 of **/8** balls = $\frac{1}{2}$ of **20** ducks = $\frac{1}{2}$ of **2** boats = $\frac{1}{2}$

Now tell these:

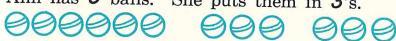
- /. At the farm Anne saw 24 chickens. $\frac{1}{2}$ of them were white. How many chickens were white?
- 2. Michael had $\boldsymbol{6}$ books. He read $\frac{1}{2}$ of them. How many did he read?
- 3. A man had 8 balloons. He sold $\frac{1}{2}$ of them. How many did he sell?

10 DIVISION FACTS IN PAIRS

Bob has 6 balls. He puts them in 2's.



Ann has 6 balls. She puts them in 3's.



Tom has 8 taffies. He puts them in 2's.

???????? *?*? ?? ?? ??

Mary has 8 taffies. She puts them in 4's.

9999999 9999 9999

How many 2's has he?

How many 3's 36 has she?

How many 2's has he?

How many 4's has she? 4/8

 $6 \div 2$ and $6 \div 3$ are a pair of division facts.

8÷2 and 8÷4 are a pair of division facts.

 $6 \div 2 = 3$ $6 \div 3 = 2$

8÷2=4 8÷4=2

Use counters on your desk to show these division facts:

How many 2's in 10? 2/10

How many **5**'s in **/0**? 5/10

How many **2**'s in **/2**? 2/12 How many 6's in /2? 6/12

2/14 How many 2's in 14?

How many 7's in /4? 7/14

live the answers to:

?÷**2**=?

 $2 \div / = ?$ $6 \div 2 = ?$ $6 \div 3 = ?$ $8 \div 2 = ?$

8÷4=?

'**0**÷**2**=?

 $12 \div 2 = ?$ $14 \div 2 = ?$ $16 \div 2 = ?$

16÷2=?

'**0**÷**5**=?

12÷6=? 14÷7=? 16÷8=? 18÷9=?

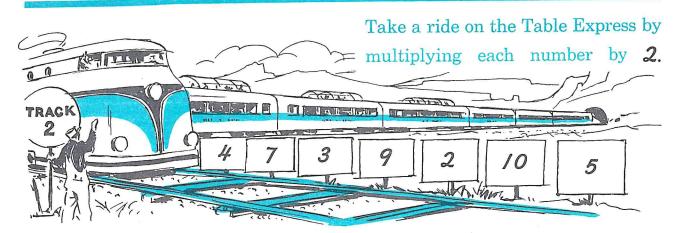
 $20 \div 2 = ?$ $20 \div 10 = ?$ $22 \div 2 = ?$ $22 \div 11 = ?$ $24 \div 2 = ?$ $24 \div 12 = ?$



/. How much must Jane pay for 2 giant pops?

 $\frac{5}{\times 2} \text{ cents}$ $\frac{\times 2}{10} \text{ cents}$

- 2. David buys 2 lollipops. How much do they cost?
- 3. If Ann buys 2 chocolate bars, how much will they cost?
- 4. Tom bought 2 nut candies. How much did they cost?
- 5. How much will Mother pay for 10 pieces of fudge?
- 6. How much will 7 pieces of chocolate fudge cost?
- 7. Dorothy bought 6 lollipops. What did she pay for them?
- 3. Ned bought 2 apples. What did they cost him?
- 9. If I buy 2 lemon sticks, what must I pay for them?
- /O. Mary Ellen bought 4 lollipops. What did she pay for them?



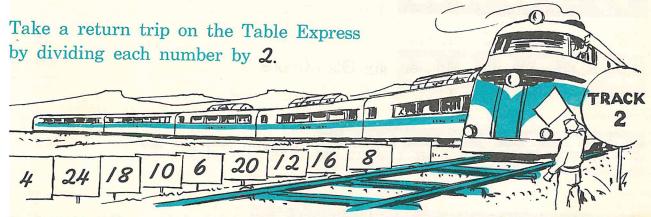
12 PROBLEMS IN BUYING (CONTINUED)

/. Bob has /O cents. How many giant pops can he buy?

5)10 10

Use the picture on page *30* to find the answers.

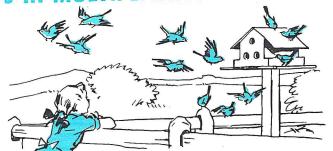
- 2. Mary has 12 cents. How many chocolate bars can she buy?
- 3. Jack has 16 cents. How many pieces of fudge can he buy?
- 4. Betty has 20 cents. How many lollipops can she buy?
- 5. How many pieces of fudge can Helen buy for 14 cents?
- 6. How many lemon sticks can I buy if I have 2 cents?
- 7. If Sam has 24 cents, how many pieces of fudge can he buy?
- 8. Mother gave Tim /4 cents for apples. How many can he buy?
- 9. How many lollipops can Anne buy if she has 18 cents?
- 10. Mark has 6 cents. How many pieces of nut candy can he buy?



Oral Drill. Say the answers:

lopy and write the answers:

13 3'S IN MULTIPLICATION



One 3 is 3 two 3's are 6 three 3's are 9 four 3's are 12 five 3's are 15

Study and say the answers:

one $\boldsymbol{3}$ is $\boldsymbol{3}$

two 3's are 6

three 3's are 9

four **3**'s are **12**

3

3+3+3=9

/×3=3

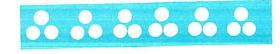
$$2\times3=6$$

 $3\times3=9$



five **3**'s are **15**

×5



six **3**'s are **/8**

3 ×6



seven 3's are 21

3 ×7



Three 3's are?

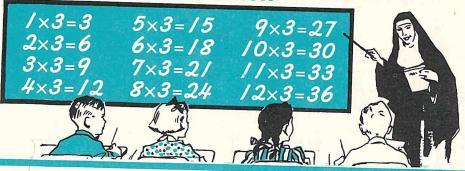
eight **3**'s are **24**

3 ×8 —

Two **3**'s are ?

Five	<i>3</i> 's	are	?
	3		
	3		
	3		
	3		
	+3	i	
		•	

4 MORE 3'S IN MULTIPLICATION



Say the answers:

3	3	3	3	3	3	3	3	<i>3</i> ×7
×/	×4	×3	×5	×2	×6	×9	×8	
3	×/0	3	3	3	3	3	3	3
×/2		×//	×5	×7	×4	×8	×6	×9

Say the missing number:

<i>4</i> × <i>3</i> =?	8 ×3=?	//×3=?	?× 3 = 9	2.2 27	
9×3=?	6×3=?	2×3=?		?×3=27	?×3= 6
7×3=?			$?\times 3=/2$?×3=2/	?×3=33
	$10\times3=?$	<i>5</i> × <i>3</i> =?	?×3= 3	?×3=24	?×3=15
/×3=?	/2×3=?	<i>3</i> × <i>3</i> =?	?×3=18	?×3=36	
				.70-00	?×3=30

If you know the cost of one thing, you multiply to find the cost of **2** or more things of the same kind.

ral problems. Think and then say the answer:

An apple costs **3** cents. How much will **5** apples cost?

 $\frac{3}{\times 5}$ cents

- . One orange costs 3 cents. How much will 4 cost?
- Jack pays 3 cents for a pear. How much will he pay for 7 pears?
- . If / peach costs 3 cents, how much will 9 peaches cost?
- A plum costs 3 cents. Find the cost of 6 plums.
- Apples are 3 cents each. How much will 8 apples cost?

MULTIPLICATION FACTS IN PAIRS



Four 3's are 12
Three 4's are 12

Tell the answers:

Five 3's are 15
Three 5's are 15

Tell the answers:

 4×3 and 3×4 are a pair of multiplication facts. 5×3 and 3×5 are a pair of multiplication facts.

Copy and finish each pair of multiplication facts:

Write these a short way:

 $3\times6=18$

Copy and multiply:

 $6 \times 3 = 18$

$$8 \times 3 = ?$$
 $3 \times 8 = ?$ $10 \times 3 = ?$ $3 \times 10 = ?$ $7 \times 3 = ?$ $3 \times 7 = ?$ $9 \times 3 = ?$ $3 \times 9 = ?$

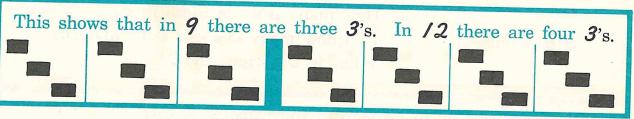
MORE MULTIPLICATION FACTS

Say the answers. You may use your counters to show each fact:

		7
/×3=?	One	3 =
$2\times3=?$	Two	3's=
$3\times3=?$	Three	3's=2
4×3=?	Four	3's=?
<i>5</i> × <i>3</i> =?	Five	3's=?
6×3=?	Six	3's=?
$7\times3=?$	Seven	3's=?

In	3	there	is	?	3
In	6	there	are	?	3's
In	9	there	are	?	3's
In	12	there	are	?	<i>3</i> 's
In	15	there	are	?	3's
In	18	there	are	?	3's
		there			
		there			
In	27	there	are	?	3's

	?× 3 =	3
112	?×3=3	27
	?×3=3	36
	?× 3 =	9
	?×3=/	18
1	?× 3 =3	33
	?×3=2	2/
	?×3=3	30
	?×3=	6

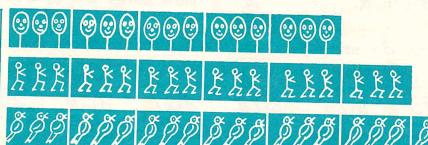


What do these pictures show?

8×3=?

9×3=?





lay the answers:

ay the answers:

×	9	4	12	6	10	1	5	7	11	3	8	2
3	27											
×	5	3	1	10	7	11	4	12	8	2	6	9
2	10											

17 3'S IN DIVISION

Tom has 6 planes.



He groups them in 3's.

How many 3's are there? 2, because two 3's are 6.

When you find how many 3's there are in 6, you are dividing 6 into 3's. You show there are two 3's in 6 in this way

36 means

How many 3's are there in 6? Into how many 3's can 6 be divided? What is **6** divided by **3**?

Do you remember how to prove that your answer is correct?

How many **3**'s in **6**?

How many 3's in 9?

2, because two 3's are 6.

3, because three 3's are 9.

Another way of writing division:

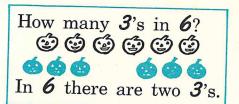
 $3 \div 3 = 1$ is read: "Three divided by three equals one."

Practice:

Say the answers:

Say these aloud. Then copy and write the answers:

18 DIVISION FACTS IN PAIRS



$$6 \div 3$$
 and $6 \div 2$ are a pair of division facts.

$$6 \div 3 = 2$$

$$6 \div 2 = 3$$

Give the answers to each pair of division facts:

18÷3=?	2/÷3=?	24÷3=?	27÷3=?	30÷3=?
18÷6=?	2/÷7=?	24÷8=?	27÷9=?	30÷/0=?
33÷ 3=?	36÷ 3=?	3÷3=?	/2÷3=?	/5÷3=?
33÷//=?	36÷/2=?	3÷/=?	/2÷4=?	/5÷5=?

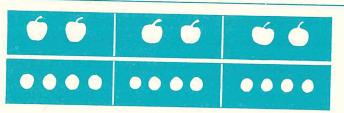
Say the answers:

$$18 \div 3 = ?$$
 $24 \div 3 = ?$ $3 \div / = ?$ $15 \div 3 = ?$ $12 \div 4 = ?$ $6 \div 2 = ?$ $27 \div 3 = ?$ $18 \div 6 = ?$ $24 \div 8 = ?$ $2/ \div 3 = ?$ $15 \div 5 = ?$ $30 \div 3 = ?$ $3 \div 3 = ?$ $27 \div 9 = ?$ $12 \div 3 = ?$ $6 \div 3 = ?$ $2/ \div 7 = ?$ $24 \div 3 = ?$

When you find $\frac{1}{3}$ of a number, you divide the number into 3 equal parts.

Find
$$\frac{1}{3}$$
 of 6 apples.

Find $\frac{1}{3}$ of 12 marbles.



$$\frac{1}{3}$$
 of $6=2$ $6 \div 3=2$

$$\frac{1}{3}$$
 of $12=4$ $12 \div 3=4$

TO FIND & OF A NUMBER, DIVIDE THE NUMBER BY 3

Say the answers:

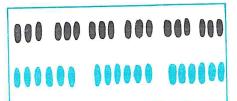
$$\frac{1}{3}$$
 of $3=$? $\frac{1}{3}$ of $15=$? $\frac{1}{3}$ of $21=$? $\frac{1}{3}$ of $27=$? $\frac{1}{3}$ of $33=$? $\frac{1}{3}$ of $9=$? $\frac{1}{3}$ of $18=$? $\frac{1}{3}$ of $24=$? $\frac{1}{3}$ of $30=$? $\frac{1}{3}$ of $36=$?

19 STORIES OF MULTIPLICATION AND DIVISION FACTS

This picture tells a story.

Four 3's are 12. In 12 there are four 3's. Three 4's are 12. In 12 there are three 4's. 4×3=/2 /2÷3=4 3×4=/2 /2÷4=3

Tell the story of this picture.



Six ? are 18.
In 18 there are ? 3's.
Three 6's are ?
In 18 there are ? 6's.

6×3=? /8÷3=? 3×6=? /8÷6=?

Say the answers:

 $3 \times 2 = ?$

3×/=3 /×3=3

$$3 \div / = 3$$

 $3 \div 3 = /$

Do the work in your copy book.

Do you know the table of 2's and the table of 3's?

Think of each answer and be ready to tell it.

$$/\times 2=?$$
 $2)2$
 $3\times 2=?$ $2)6$
 $5\times 2=?$ $2)/0$
 $7\times 2=?$ $2)/4$
 $9\times 2=?$ $2)/8$
 $//\times 2=?$ $2)22$

$$2 \times 2 = ?$$
 $2 \overline{\cancel{4}}$
 $4 \times 2 = ?$ $2 \overline{\cancel{8}}$
 $6 \times 2 = ?$ $2 \overline{\cancel{10}}$
 $8 \times 2 = ?$ $2 \overline{\cancel{10}}$
 $\cancel{10} \times 2 = ?$ $2 \overline{\cancel{20}}$
 $\cancel{12} \times 2 = ?$ $2 \overline{\cancel{24}}$

tell it.

/×3=?
$$3 \overline{\smash{\big)}3}$$

3×3=? $3 \overline{\smash{\big)}9}$

5×3=? $3 \overline{\smash{\big)}15}$

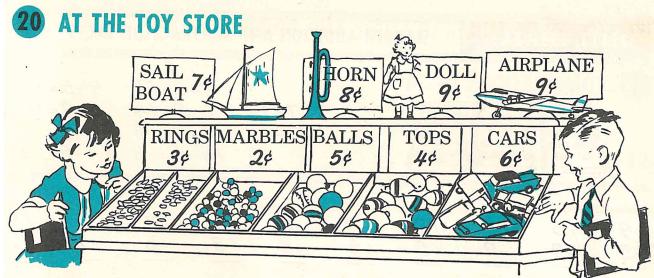
7×3=? $3 \overline{\smash{\big)}27}$

9×3=? $3 \overline{\smash{\big)}27}$

//×3=? 3\33

$$4 \times 3 = ?$$
 $3)/2$
 $6 \times 3 = ?$ $3)/8$
 $8 \times 3 = ?$ $3)24$
 $10 \times 3 = ?$ $3)30$
 $12 \times 3 = ?$ $3)36$

 $2 \times 3 = ? 3 | 6$



Mrs. King has a toy store. The children often go there to buy toys. These problems are about toys.

Do the work in your copy book.

/. How much will John pay for 3 tops?

4¢ ×3 12¢

- 2. What must Jack pay for 3 balls?
- 3. Ted bought 3 cars. How much did they cost?
- 4. How much must Robert pay for 3 large marbles?
- 5. Ann bought 3 dolls. How much money did she spend?
- How much will Ben pay for horns?
- 7. How much money will you spend if you buy 3 rings?

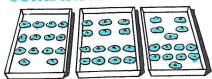
Mary has 27 cents. How many dolls can she buy?

3 dolls 9¢)27¢

- 9. How many rings can Jane buy for 15 cents?
- /O. If Jack has 2/ cents, how many boats can he buy?
- //. How many tops can I buy for /2 cents?
- /2. Tom has 24 cents. How many big glass marbles can he buy?
- /3. How many cars can I buy for/8 cents?
- /4. How many horns can you buy for 24 cents?

UNIT THREE:

HARDER ADDITION AND SUBTRACTION FACTS



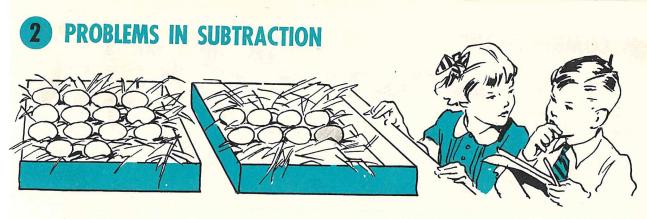
Say the answers:

Look at the picture a. d tell the answers:

- /. In the first pan there are ? cookies and? cookies. How many are there in the pan?
- 2. In the second pan there are? cookies and? cookies. How many cookies are there in the pan?
- 3. In the third pan there are? cookies and? cookies. How many cookies are there?
- 4. If Molly takes 5 cookies out of the third pan, how many will be left?
- 5. If Molly takes 7 cookies out of the second pan, how many will be left?

Add:

Subtract. Watch the endings:



There are /4 eggs in one box and 8 eggs in another box. How many more than 8 is /4? /4 is 6 more than 8. How many less than /4 is 8? 8 is 6 less than /4.

To find how many more one number is than another

or

How much less one number is than another, you subtract

Read each of these problems. Subtract the numbers and write the remainders.

- /. At the airport there were 4 airplanes in the air and /3 airplanes on the ground. How many more airplanes were on the ground than in the air?
- 2. In one box there were **8** pencils and in another box there were **13** pencils. How many more pencils were there in the second box?
- 3. Anne paid 45 cents for a statue and Mary paid 30 cents for one. How much less did Mary pay than Anne?
- 4. Martin weighs 64 pounds. His brother weighs 77 pounds. How much less does Martin weigh than his brother?
- 5. The girls read 2/ books from the classroom library and the boys read 35 books. How many more books did the boys read than the girls?
- 5. Father drove **20** miles on Friday and **45** miles on Saturday. How many more miles did he drive on Saturday than on Friday?
- 7. Joseph had **50** cents. He wanted to buy a game that cost **75** cents. How much more money did he need to buy the game?
- 7. The mailman carried **85** letters one day and **63** letters another day. How many more letters did he carry the first day?

3 COMBINATIONS OF 15

7 8 15 15 9 6 15 15

+8 +7 -8 -7 +6 +9 -6 -9

15 15 7 8 15 15 9 6

Say the answers:

Read each problem and give the answer:

- / Mary sees 8 fish and Sally sees 7 fish. How many fish do they see?
- 2. Tom has 15 fish in his fish pond. If he takes 8 fish out, how many will be in the pond?
- 3. Dick had 6 fish. His dad bought 9 more for him. How many had he then?
- 4. Don had 15 fish. He sold 9 of them. How many had he left?
- 5. Jane saves 9 cents one week and 6 cents another week. How much does she save in the two weeks?
- 6. Sister had 15 holy cards. She gave 9 of them away. How many had she left?
- 7. Alice has 7¢ and her sister has 8¢. How much money do they have?
- 8. You have 15 fish and give 7 away. How many do you have left?



When you add, your answer is always larger than any of the numbers you are adding.

Copy a	nd fir	d th	e su	m:
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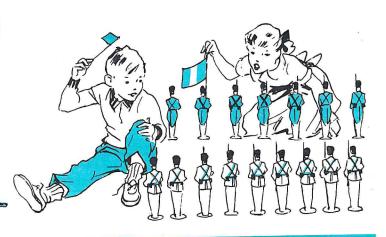
Cob.	y and mid th	ie suili.						
2/	30	23	30	32 12		41	23 32	43
33	42 94	5 / 75	63	83 64		76 70	74 84	50 62
4 1 2 -	2 3 4 -	2 3 3	5 4 0	5 / 2	2 4 2	5 3 /	3 3 —	5
5 3 3	6 2 3	4 4 3	3 5 3	<i>4 3 5</i>	5 5 4	7 3 3	5 6 2	9 4 2

When you subtract, your answer is always smaller than the number you subtract from.

Copy and find the difference:

OPJ	CLICA LILICA DI	ic different	CC.	•		_ *	
99	89 43	78 26	67 44	56 15	45 23	38	29
25	36 23	47 22	58 35	69 46	72 51	84 74	95 85
74 50	85 60	7 <i>3</i> <i>30</i>	62	51	49 40	58 50	67
35 75	43 23	74 70	86 36	<i>39 29</i>	57 47	92 90	61

5 COMBINATIONS OF 16



Say the answers:

Think about the problems and give the answers:

- / John had **9** toy soldiers. Mary had **7** soldiers. How many soldiers did they have?
- 2. David had 16 toy soldiers. He gave 7 to his sister. How many had he then?
- 3. There were 16 boys in the room. 9 boys went out. How many were left?
- 4. Dad gave Mary 16 cents. She spent 8 cents. How much had she left?
- 5. Tim saw 16 planes. Jack saw 7. How many more planes did Tim see than Jack?
- 6. Tim had /4 cents in his bank. He took 8 cents out. How much was left?
- 7. Bill had 15 toy rockets. He gave 9 of them to David. How many had he left?
- 8. Alice had 7 dolls and Jane had 9. How many dolls did they have?

6 COMBINATIONS OF 17



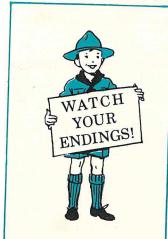
Give the answers:

9+8	8	17	17	7	14	9	7.	16	16	8	7
				+/		+/	+9	<u>-9</u>	$\frac{-7}{}$	+7	+8
15 -8	15 -7	+6	12	+5	<i>14</i> <i>-9</i>	/4 -5	13	8 + 6	<i>5</i> +7	/2 -7	/2 -5
8 +3	// -8	11 -9	// -3	8 +2 —	7 +7	/4 -7	/0 -2	9-2	7 -2	9-0	

Tell the answers to these problems:

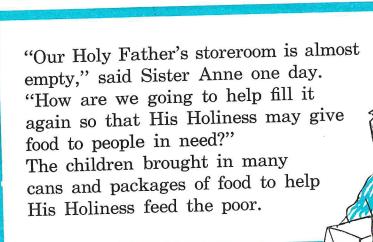
- /. In the first box there are 9 flowers, and in the second box there are 8 flowers. How many flowers are in both boxes?
- 2. Mary sees /7 flowers. If she cuts 9 of them, how many will she have left?
- 3. Tom picks 17 flowers for Our Lady. 8 of them are white. The others are pink. How many are pink?
- 4. Joan has 9 flowers for her mother and 8 flowers for her sister. How many flowers does Joan have?

Add these numbers quickly. Wa



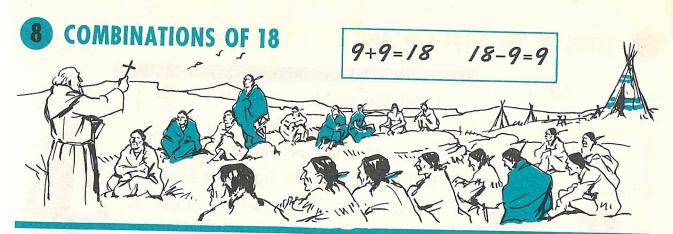
quickly.	Watc	h the en	dings:			
13	23	33	43	<i>53 4</i>	63 4	73 4
16	26 3	36	46	56 3	66	76 3
16	26 2	36	46	56 2	66	76 2
18	28	38	48	<i>58</i> /	68	78

PROBLEMS IN ADDITION AND SUBTRACTION



Remember the steps in doing problems. Do the work carefully:

- /. There were 23 cans of orange juice, 34 cans of prune juice, and 30 cans of pineapple juice. How many cans of juice were there?
- 2. One box had 12 pounds of sugar, another box had 20 pounds of sugar, and a third box had 24 pounds of sugar. How many pounds of sugar were there altogether?
- 3. Jane brought /2 packages of powdered milk, Mary brought /0 packages, and Susan brought /5 packages. How many packages of powdered milk did the three girls bring?
- 4. Tom brought 24 candy bars, Peter brought 20 candy bars, and Michael brought 15 bars. How many candy bars did they bring?
- 5. Mary counted out 40 packages of strawberry jello, 26 packages of cherry jello, and 32 packages of raspberry jello. How many packages of jello did she count?
- 6. The boys brought 56 cans of vegetables and the girls brought 68 cans of vegetables. How many more cans did the girls bring than the boys?
- 7. Grace brought 7 boxes of cereal, Jean brought 4 boxes, and John brought 2 boxes. How many boxes of cereal were there altogether?
- 8. The girls had 34 packages of cake mix to give Sister and the boys had 48 packages. How many more packages did the boys bring than the girls?



Find the answers:

- /. At first Father Smith met only 9 Indians. Then he met 9 more. How many did he meet?
- 2. Father Smith taught the Indians to pray. He taught them 18 little prayers and 9 longer ones. How many prayers did he teach them?
- 3. The Indians wanted to know about God. 20 came on one day to hear Father Smith and 39 came the next day. How many came in two days?
- 4. One Indian walked 18 miles to see Father Smith. Another walked 9 miles. How many miles less than the first did the second Indian walk?

Say the answers:

9 STEPS IN PROBLEM SOLVING

Tom has **/2** stamps. Ned has **3** times as many. How many has Ned?



- /. Read the problem carefully.
- What does the problem ask?
- 3. What does the problem tell?
- Will my answer be larger or smaller?
- For a larger answer, add or multiply.
 For a smaller answer, subtract or divide.
- 6. Which process shall I use? Why?

ठ



ANSWER BE LARGER



Read each problem and tell what to do to find the answer:

- / The fourth grade boys sold **76** tickets for the school play. The girls sold **53** tickets. How many did they sell together?
- 2. There are 44 boys in our room.
 3 of them are absent. How many boys are present?
- 3. There are 9 apples in each basket. How many apples are there in 3 baskets?
- 4. John saved 65 stamps and Bob saved 94. How many stamps did they both save?
- 5. There were 28 boys and 15 girls at the school party. How many more boys than girls were at the party?

- 1. My answer will be larger.
- 2. For a larger answer, I shall + or \times
- 3. I shall add to find the answer.
- 1. My answer will be smaller.
- 2. For a smaller answer, I shall or ÷
- 3. I shall subtract to find the answer.
- 1. My answer will be
- 2. For a answer, I shall
- 3. I shall to find the answer.
- 1. My answer will be
- 2. For a answer, I shall
- 3. I shall to find the answer.
- 1. My answer will be
- 2. For a answer, I shall
- 3. I shall to find the answer.

10 STEPS IN PROBLEM SOLVING (CONTINUED)



Now read these problems. Work each problem, following the steps on page 48.

- /. Rose read 48 pages of her book and Helen read 6/ pages. How many pages did they both read?
- 2. Sarah had 68 cents in her bank. She took 16 cents out. How much had she left?
- 3. In the parade there were 3 rows of sailors. Each row had 8 sailors. How many sailors were in the parade?
- 4. Sister has 24 pieces of chalk. If she puts 3 pieces in each box, how many boxes will she need?
- 5. Farmer Gay has 12 cows. Farmer Green has twice as many. How many cows has Farmer Green?
- 6. Jimmy is 33 inches tall. Tim is 5 inches taller than Jimmy. How tall is Tim?
- 7. Ann is 42 inches tall. Sarah is 55 inches tall. How many inches taller than Ann is Sarah?
- 8. Mother had 22 cookies. She divided them between 2 boys. How many cookies did each boy have?
- 9. If each boy in our club carries 2 chairs, how many chairs will /0 boys carry?
- 10. Bob keeps his stamps in a stamp book. He has 24 stamps on 2 pages. How many stamps has he on one page if he has the same on each?

UNIT FOUR:

MOVING FORWARD IN MULTIPLICATION AND DIVISION

4'S IN MULTIPLICATION

One
$$\mathcal{H}$$
 Two \mathcal{H} Three \mathcal{H} Four \mathcal{H} 's \mathcal{H} 's \mathcal{H} 's



Say the answers:

AAAA

AAAA AAAA

AAAA AAAA AAAA

One 4 is 4.

Two 4's are 8. $2\times4=8$

Three 4's are 12. $3\times4=12$

Four 4's are 16. $4 \times 4 = 16$

/×4=4

Five 4's are 20. $5 \times 4 = 20$

5×4=?

×5

 $2 \times 4 = 20$

 $? \times 4 = 28$

Use counters on your desks to show these facts. Say the answers:

AND DESCRIPTION OF THE PERSON	
One	4 is 4
Two	4 's are 8
Three	4 's are /2
Four	#'s are /6
Five	4 's are 20
Six	4 's are 24
Seven	4 's are 28
Eight	4 's are 32
Nine	4 's are 36
Ten	4 's are 40
Eleven	4's are 44
Twelve	4's are 48

2 MORE 4'S IN MULTIPLICATION

/×4= 4	4×4=16	≈7×4=28	/0×4=40
2×4= 8	5×4=20	8×4=32	//×4=44
$3\times4=12$	6×4=24	9×4=36	12×4=48

Say the answers:

Do you know the missing numbers?

Working with Groups:

Jane puts 4 pieces of candy on each plate. How many pieces does she put on 3 plates?

In this problem 4 pieces of candy are in each group. You want to find the number in 3 groups.

There will be 4+4+4 or 12 pieces.

A shorter way to find your answer is to say $3\times4=12$ pieces.

When you know how many are in one group and you want to find how many there are in two or more groups, you multiply.

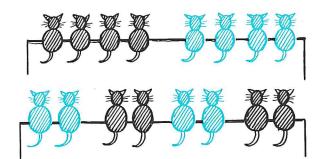
Nork each problem:

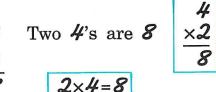
- /. Mary has 4 dresses for each doll.

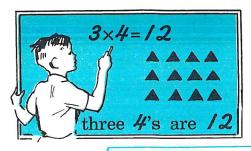
 How many dresses has she for 6 dolls?
- 2. Patsy has 4 hats for each doll. How many hats has she for 7 dolls?
- 3. Jack drinks 4 glasses of milk each day.

 How many glasses of milk does he drink in 5 days?
- Letter There are 4 cakes on each plate. How many cakes are on 9 plates?
- Each day Betty draws 4 pictures. How many does she draw in 4 days?
- 5. Each boy has 4 pencils. How many pencils do 8 boys have?

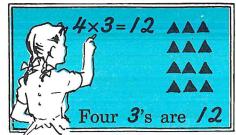
3 MULTIPLICATION FACTS IN PAIRS





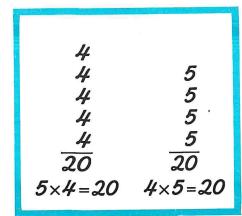


Three 4's are /2Four 3's are /2 $3 \times 4 = /2$ $4 \times 3 = /2$



 2×4 and 4×2 are a pair of multiplication facts. 3×4 and 4×3 are a pair of multiplication facts.

Study the long and the short way.



Tell the missing numbers that belong in each box to make pairs.

VII ULIU IIII				
10×4= ?	//×4= ?	/2×4= ?	/×4= ? 4× ?=4	3×4= ? 4×?=/2
4×?=40	4×?=44	4×?=48		
8×4= ?	6 × 4 = ?	9 × 4 = ?	7 × 4 = ?	/ 2 × 4 = ?
? × ?= ?	? × ?= ?	? × ?= ?	? × ?= ?	? × ?= ?
/×4= ?	10×4= ?	<i>5</i> × <i>4</i> = ?	2×4=?	<i>3</i> × 4 = ?
? × ?= ?	? × ?= ?	? × ?= ?	? × ?= ?	? × ?= ?

4'S IN DIVISION

Sam has 12 chicks.

He puts them in 4's.



How many 4's has he?

In 12 there are three 4's, because three 4's are 12.

77	光 类 ≯
	3
	4/12
	12

Study the table:

One	4 is 4
Two	4's are 8
Three	4's are /2
Four	4's are 16
Five	4's are 20
Six	4's are 24
Seven	4's are 28
Eight	4's are 32
Nine	4's are 36
Ten	4's are 40
Eleven	4's are 44
Twelve	4's are 48

Say the answers:

In 4 there is ? 4 because ? 4 is 4 In 8 there are ? 4's because ? 4's are 8 In /2 there are ? 4's because ? 4's are /2 In /6 there are ? 4's because ? 4's are /6 In 20 there are ? 4's because ? 4's are 20 In 24 there are ? 4's because ? 4's are 24 In 28 there are ? 4's because ? 4's are 28 In 32 there are ? 4's because ? 4's are 32 In 36 there are ? 4's because ? 4's are 36 In 40 there are ? 4's because ? 4's are 40 In 44 there are ? 4's because ? 4's are 44 In 48 there are ? 4's because ? 4's are 44

How many 4's in 4?

One, because one 4 is 4.

4)4

How many 4's in 8?

Two, because two 4's are 8.

4)8

Divide and prove that your answer is correct:

4)4 4)8 4)12 4)16 4)20 4)24 4)28 4)32 4)36 4)40 4)44 4)48 4)32 4)28 4)36 4)12 4)20 4)48

'lay this game by saying the answers:

4												
into	8	20	32	4	16	44	12	24	48	36	28	40

DIVISION FACTS IN PAIRS

Here are 20 Indians.

They march in fours.

的原始的 的复数的 网络约翰

In 20 there are five 4's because five 4's are 20.

4 20 20

There are 5 Indians in each canoe:







In 20 there are four 5's because four 5's are 20.

20

Give the answer for each pair of division facts:

<i>4÷4=</i> ?	8÷4= ?	/2÷ 4 = ?	24÷ 4 = ?	28÷ 4 = ?
<i>4÷ f=</i> ?	8÷2= ?	/2÷ 3 = ?	24÷ 6 = ?	28÷ 7 = ?
32÷4= ?	36÷4= ?	#0÷ # = ?	44÷ 4 = ?	48÷ 4 = ?
32÷8= ?	36÷9= ?	#0÷ 10 = ?	44÷ 1 1 = ?	48÷/2= ?
	22. //	_ ?	4÷ 4 = ?	12÷ 4 = ?

$$24 \div ? = 4$$
 $32 \div ? = 4$
 $8 \div 4 = ?$
 $8 \div ? = 4$
 $48 \div ? = 4$
 $48 \div ? = 4$
 $44 \div ? = 4$

Copy and divide and prove that your answer is correct:

$$4)24$$
 $6)24$ $4)32$ $8)32$ $4)20$ $5)20$ $4)4$ $1)4$ $4)40$ $10)40$ $4)36$ $9)36$ $4)8$ $2)8$ $4)28$ $7)28$

Multiply and add and be ready to give your answers:

$$4 \times 3 + 1 = ?$$
 $4 \times 2 + 3 = ?$
 $4 \times 5 + 1 = ?$
 $4 \times 8 + 3 = ?$
 $4 \times 6 + 2 = ?$
 $3 \times 6 + 1 = ?$
 $3 \times 9 + 2 = ?$
 $3 \times 5 + 1 = ?$
 $3 \times 8 + 2 = ?$
 $3 \times 4 + 2 = ?$
 $4 \times 3 + 2 = ?$
 $4 \times 5 + 3 = ?$
 $4 \times 7 + 3 = ?$
 $4 \times 9 + 1 = ?$
 $4 \times 6 + 2 = ?$

STORIES OF MULTIPLICATION AND DIVISION FACTS

This picture tells the story of 6×4 :

££££ ££££ ££££ ££££ ££££

Six 4's are 24. In 24 there are six 4's. Four 6's are 24. In 24 there are four 6's.

Copy and write the answers:

1.4011.			
$/ \times 4 = ?$ $/ 4 \div / = ?$ $/ 2 \div$	$-4=? 20 \div 5=?$	28÷4=?	440-2
$4 \times 1 = ?$ $3 \times 4 = ?$ 12.	2-2 7.4.0	00.7-	7×7=!
$4 \times 1 = ?$ $3 \times 4 = ?$ $12 \div 4 + 2 = ?$	3=! /×4=?	28÷/=?	36÷4=?
4÷4=? 4×3=? 20÷	$-4=9$ $1/\sqrt{7}=9$	9×4=?	010

Write the stories for these multiplication and division facts: 2×4=?

8×4=?

10×4=?

//×4=?

12×4=?

Multiply:

2	3	4	
×4	$\times 2$	×2	

TO FIND / OF A NUMBER

DIVIDE THE NUMBER BY 4

Say the answers:

$$\frac{1}{4}$$
 of $4=?$
 $\frac{1}{4}$ of $8=?$
 $\frac{1}{4}$ of $12=?$

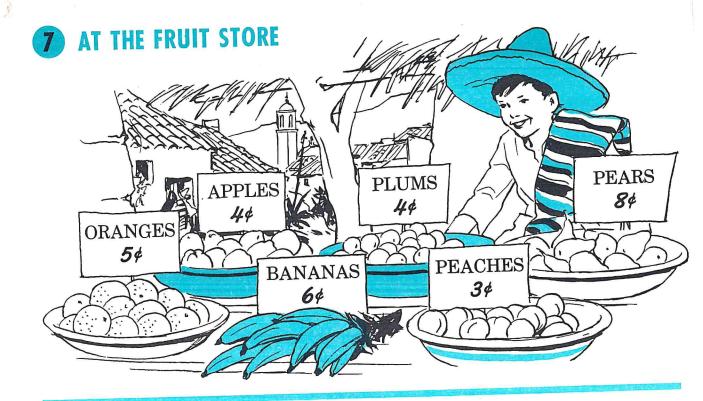
$$\frac{1}{4}$$
 of $40 = ?$
 $\frac{1}{4}$ of $44 = ?$

$$\frac{7}{4}$$
 of $24 = ?$

$$\frac{1}{4}$$
 of $36 = ?$

Think before you do these problems. Be ready to give the answers:

- 1. 40 children took a test in arithmetic. of them made no mistake. How many children made no mistakes?
- 2. Joseph has 36 stamps in his book. 4 of them are red stamps. How many red stamps has Joseph?



The little Mexican boy sells fruit. These problems are about the fruit he sells.

Tell the answers:

- /. How much will 4 oranges cost?
- 2. Find the cost of 6 apples.
- 3. What must I pay for 7 plums?
- 4. How much must Tim pay for 4 pears?
- 5. What must Susan pay for 12 peaches?
- 6. How many apples can I buy for 40 cents?
- 7. Ned has 32 cents. How many pears can he buy?
- 8. If Anne has 24 cents, how many bananas can she buy?
- 9. How many peaches can Helen buy for 36 cents?
- 10. Bill has 20 cents. How many oranges can he buy?

Table review. See how quickly you can say the answers:

Table Tevlew. See now quasis:
$$10 \div 2 = ?$$
 $33 \div 3 = ?$ $4 \times ? = 28$ $2 \times 5 = ?$ $2 \times 4 = ?$ $10 \times 2 = ?$ $16 \div 4 = ?$ $12 \div 2 = ?$ $9 \times ? = 36$ $3 \times 9 = ?$ $6 \times 3 = ?$ $12 \times 2 = ?$ $15 \div 5 = ?$ $3 \times ? = 12$ $2 \times 3 = 21$ $4 \times 12 = ?$ $4 \times$

TARANT CONTRACTOR OF THE ARMS OF THE POST OF THE PARTY OF

TWO-PLACE NUMBERS IN MULTIPLICATION

Tom earned 2/ cents each day after school. How much did he earn in 2 days?

There are two ways to find the answer.

You may add the numbers this way:

Multiplication is a short way to add.

Multiply the numbers this way:

2/4 Multiply the units by 2. $2 \times 1 = 2$. Write 2 in units' place in the answer.

 $\times 2$ Multiply the tens by 2. $2 \times 2 = 4$. Write 4 in tens' place in the answer.

42¢ Tom earned 42 cents in 2 days.

Copy and multip	lv. Remember	c to	begin	in	units'	place	to	multiply:
-----------------	--------------	------	-------	----	--------	-------	----	-----------

COP	alla lilator	PLJ . LUC				1	1 0	
14	24	32	22	43	23	44	31	33
×2	×2	$\times 2$	$\times 2$	$\times 2$	$\times 2$	$\times 2$	$\times 2$	$\times 2$
33	21	13	22	32	23	22	//	21
	× //	×3	×4	×.3	×.3	×4	×4	×3
×3	×4		^7					

Here are some examples in which you multiply cents.

Put the cent sign (*) in the answer.

22¢ 3/¢ 2/¢ 44¢ 32¢ /4¢ /3¢ 33¢
$$\times 3$$
 $\times 3$ $\times 3$ $\times 2$ $\times 2$ $\times 2$ $\times 2$ $\times 3$ $\times 3$

In these examples the answers are more than 99. In writing the answers put units under units, tens under tens, and move hundreds to the left.

53 ×2 706	74 1. <u>×2</u>	8/ ×2	63 ×2	94 4. ×2	72 ×2	93 ×2	84 ×2
43	6/	72	93	5. ×3	8/	63	82
2. ×3	×3	×3	×3		×3	×3	×3
2/	42	8/	92	6. ×4	32	4/	5/
3. <u>×4</u>	×4	×4	×4		×4	×4	×4

ZEROS IN MULTIPLICATION

At Jane's Halloween party the children had fun ducking for apples. One point was given for each apple brought out of the water. Michael took 3 turns, but each time he failed to bite an apple. What was Michael's score?

$$0+0+0=0$$

$$3\times0=0$$

When we multiply $\mathbf{0}$ by any number, the answer is $\mathbf{0}$.

Say the answers:

$$4\times0=?$$
 $1\times0=?$

Drill in multiplication and addition. How well do you remember?

$$2 \times 0 + 1 = ?$$

$$4 \times 0 + 1 = ?$$

There are 30 pretzels in a can. How many pretzels are there in 2 cans?

$$\times 2$$

$$2\times0=0$$

$$2 \times 3 = 6$$
 Write 6 in tens' place in the answer.

There are
$$60$$
 pretzels in 2 cans.

Copy and multiply. In writing the answer, put units under units, tens under If the answer is more than 99, remember to move it to the left.

Say the answers to the examples below:

$$\frac{1}{2}$$
 of $10=?$

$$\frac{1}{4}$$
 of $24 = ?$

$$\frac{1}{2}$$
 of $20 = ?$

$$\frac{1}{4}$$
 of $40 = ?$
 $\frac{1}{4}$ of $20 = ?$

10 5'S IN MULTIPLICATION

Tom is playing with his toy airplanes. He has them in his make-believe airport. How many planes are in each group? How many groups does

Tom have in all?	
	\$ ~ \$ ~
	1

four 5 's	five 5 's	six 5 's	seven 5's
5 5 5 +5	5 5 5 5 +5	5 5 5 5 5 +5	5 5 5 5 5 5 5 +5
4×5=20	5×5-25	6 5. 20	He

770-20	JXJ=		$6 \times 5 = 30$	$7\times5=35$
8×5=40	9×5=45	10×5=50	//×5=55	/2×5=60

Say the answers:

5	5	5	5	5	5	5	5	5
×4	×8	×12	×/	×/0	×7	×//	×6	×3
5	<i>5</i>	<i>5</i>	5	5	5	5	<i>5</i>	5
×9	×2	×5	×7	×8	×9	×4	×0	×/2

Multiplication facts in pairs. Show pictures of these facts on your desks and tell the answers:

$$1 \times 5 = 5$$
 and $5 \times / = 5$
 $8 \times 5 = ?$ and $5 \times 8 = ?$
 $2 \times 5 = ?$ and $5 \times 2 = ?$
 $9 \times 5 = ?$ and $5 \times 9 = ?$
 $3 \times 5 = ?$ and $5 \times 3 = ?$
 $1 \times 5 = ?$ and $5 \times 10 = ?$
 $4 \times 5 = ?$ and $5 \times 4 = ?$
 $1 \times 5 = ?$ and $5 \times 10 = ?$
 $4 \times 5 = ?$ and $5 \times 6 = ?$
 $1 \times 5 = ?$ and $5 \times 10 = ?$
 $4 \times 5 = ?$ and $5 \times 7 = ?$
 $1 \times 5 = ?$ and $1 \times 5 \times 10 = ?$

11 5'S IN DIVISION

One	5 is	5	In 5	there	is	one	5	5 5	$5 \div 5 = ?$
Two	5 's are /	10	In /0	there	are	two	5 's	5)10	10÷5=?
Three	5 's are /	15	In /5	there	are	three	5 's	5)15	<i>15÷5</i> = ?
Four	5 's are 2	20	In 20	there	are	four	5 's	5)20	<i>20÷5= ?</i>
Five	5 's are 3	2 <i>5</i>	In 25	there	are	five	5 's	5 25	<i>25÷5</i> = ?
Six	5 's are	30	In <i>30</i>	there	are	six	5 's	5)30	<i>30</i> ÷ <i>5</i> = ?
Seven	5 's are	35	In <i>35</i>	there	are	seven	5 's	5 35	<i>35÷5</i> = ?
Eight	5 's are	40	In 40	there	are	eight	5 's	5)40	<i>40</i> ÷ <i>5</i> = ?
Nine	5 's are	45	In 45	there	are	nine	5 's	5 45	<i>45</i> ÷ <i>5</i> = ?
Ten	5 's are 3	50	In <i>50</i>	there	are	ten	5 's	1	<i>50</i> ÷ <i>5</i> = 1?
Eleven	5 's are 3	55	In <i>55</i>	there	are	eleven	5 's	•	<i>55</i> ÷ <i>5</i> = ?
Twelve	e 5 's are a	56	In 60	there	are	twelve	5 's	5)60	<i>60</i> ÷ <i>5</i> = ?

Divide and prove that your answer is correct:

5)5 <u>5</u>	/, because	one 5 is 5 .	. 10	2 , becau	use two 5 's	are /0.
<i>5</i>)/5	5\ <u>20</u>	5)25	5)30	5\35	5)40	5)45
5)55	5)60	5)45	<i>5)35</i>	5)15	5)25	5)50

Division facts in pairs. Say the answers:

DIVIDIOII ICCCD 111	Potter			
$5 \div 5 = 1$ and	$5\div I=5$	<i>35</i> ÷ <i>5</i> = ?	and	<i>35</i> ÷ 7= ?
$/0 \div 5 = ?$ and		<i>40</i> ÷ <i>5</i> = ?	and	40÷ 8= ?
$/5 \div 5 = ?$ and		<i>45</i> ÷ <i>5</i> = ?	and	45÷ 9=?
$20 \div 5 = ?$ and				<i>50</i> ÷/ <i>0</i> = ?
$30 \div 5 = ?$ and		<i>55</i> ÷ <i>5</i> = ?	and	<i>55</i> ÷//= ?

2 DIVISION FACTS IN PAIRS



***** In 10 there are five 2's. $\star\star$ **

 $10 \div 5 = 2$ and $10 \div 2 = 5$ are a pair of division facts.

Division facts in pairs. Finish each pair of facts:

$$5 \div 5 = ?$$
 and $5 \div / = ?$

$$35 \div 5 = ?$$
 and $35 \div 7 = ?$

$$5 \div 5 = ?$$
 and $5 \div / = ?$ | $35 \div 5 = ?$ and $35 \div 7 = ?$ | $50 \div 5 = ?$ and $50 \div / 0 = ?$

$$20 \div 5 = ?$$
 and $20 \div 4 = ?$

$$40 \div 5 = ?$$
 and $40 \div 8 = ?$

$$20 \div 5 = ?$$
 and $20 \div 4 = ?$ $40 \div 5 = ?$ and $40 \div 8 = ?$ $55 \div 5 = ?$ and $55 \div 1/=?$

$$30 \div 5 = ?$$
 and $30 \div 6 = ?$

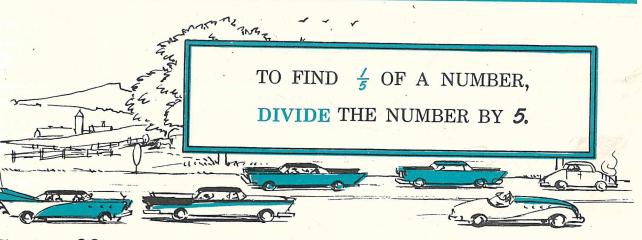
$$45 \div 5 = ?$$
 and $45 \div 9 = ?$

$$30 \div 5 = ?$$
 and $30 \div 6 = ?$ $45 \div 5 = ?$ and $45 \div 9 = ?$ $60 \div 5 = ?$ and $60 \div 12 = ?$

Say the answers:

$$45 \div 5 = ?$$

$$35 \div 5 = ?$$



Fim has 30 marbles. He loses $\frac{7}{5}$ of them. How many does he lose? $\frac{1}{5}$ of 30 means $30 \div 5$ $30 \div 5 = 6$ Tim loses 6 marbles.

Copy and write the answers:

$$\frac{1}{5}$$
 of $10=$? $\frac{1}{5}$ of $60=$? $\frac{1}{5}$ of $55=$? $\frac{1}{5}$ of $5=$? $\frac{1}{5}$ of $30=$? $\frac{1}{5}$ of $45=$? $\frac{1}{5}$ of $40=$? $\frac{1}{5}$ of $35=$? $\frac{1}{5}$ of $25=$? $\frac{1}{5}$ of $50=$? $\frac{1}{5}$ of $20=$? $\frac{1}{5}$ of $15=$?

13 STORIES OF MULTIPLICATION AND DIVISION FACTS

Say the story of:

<i>3</i> × <i>5</i>	/×5	6×5	/2×5
3×5=/5	/×5=?	6×5=?	/2×5 =?
5×3=/5	5×/=?	5×6=?	5×/2=?
/5÷5= 3	5÷5=?	30÷5=?	60÷ 5=?
/5÷3= 5	5÷/=?	30÷6=?	60÷/2=?

In your copy book write the story of:

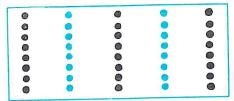
		= -	2.5
2×5	<i>9×5</i>	7×5	<i>3</i> × <i>5</i>
	•	<i>I</i> , <i>E</i>	/0×5
6×5	8×5	<i>4</i> × <i>5</i>	/UX3

Working with groups:

If you know how many there are in all, and how many groups there are, divide to find how many in each group.

There are 40 boys in our room in 5 rows of desks.

How many boys are in each row?



In this problem, there are 40 boys in all.

There are 5 groups or rows.

Divide to find how many in each group or row: $40 \div 5 = 8$. There are 8 boys in each row.

Say the number that tells how many there are in all.

Say the number that tells the number of groups.

Do the following in your copybook. Show which number tells how many there are in all. Which number tells the number of groups?

- /. At Mary's party **25** children were sitting at **5** tables. How many children were at each table?
- 2. If there are 15 flowers in 3 vases, how many flowers in each vase?
- 3. There are 36 girls in 4 rows of desks. How many girls in each row?
- 4. 30 candy bars are in 5 boxes. How many candy bars are in each box?
- 5. If Mary put 24 pretzels in 4 bags, how many pretzels are there in each bag?

1

LEARNING TO CARRY

Tom had 46 marbles. He won 27 more. How many marbles had he then? To find how many marbles Tom had, you must add 46 and 27.

7 units and 6 units are 13 units.

13 cannot be put in the units' column.

Change /3 units to / ten and 3 units.

Write 3 in the units' column in the sum, and carry the 1 ten to the tens' column.

Then you have the / ten carried + 2 tens

are 3 tens + 4 tens are 7 tens. Write 7 in the tens' column.



46 marbles

27 marbles

73 marbles

Say the answers:

26 56 2 is in the units' column because 6 and 6 are? and 12 means? ten and? units.

The ? ten is carried to the ? column and added to the tens already there.

45 28 3 is in the units' column because 8 and 5 are? and 13 means? ten and? units.

The ? ten is carried to the ? column and added to the tens already there.

Copy and add:

ADDING BY ENDINGS

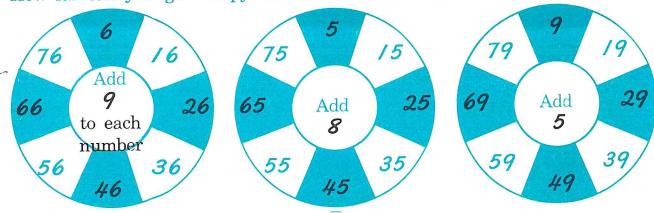
2+9=// The ending is / 4+8=12 The ending is 2 6+7=13 The ending is 3



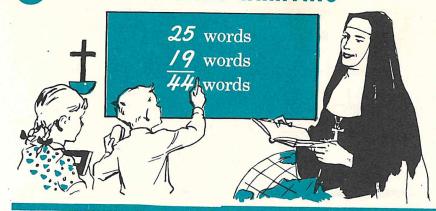
7+4=// The ending is / 3+9=12 The ending is 2 4+9=13 The ending is 3

Say th	ne answer	s auickly	:	OLD THE REAL PROPERTY.				6
9+2	19	29	<i>39</i>	<i>49</i>	<i>59</i>	69	79	89
	+2	+2	+2	+2	+2	+2	+2	+2
8	/8	28	38	48	58	68	78	88
+4	+4	+4	+4	+4	+4	+4	+ <u>4</u>	+4
7	/7	27	37	47	<i>57</i>	67	77	87
+6	+6	+6	+6	+6	+ <i>6</i>	+6	+6	+6
<i>4</i>	/ <i>4</i>	24	<i>34</i>	<i>44</i>	<i>54</i>	64	74	<i>84</i>
+7	+7	+7	+7	+7	+7	+7	+7	+ <i>7</i>
9	/9	29	39	49	<i>59</i>	69	79	89
+3	+3	+3	+3	+3	+ <i>3</i>	+3	+3	+3
9+4	/9	29	<i>39</i>	49	59	69	79	89
	+4	+4	+ <i>4</i>	+4	+4	+4	+4	+4

How far can you go? Copy the numbers and add:



PROBLEMS WITH CARRYING



5 and 9 are 14
8 and 6 are 14
7 and 8 are 15
6 and 9 are 15
7 and 6 are 13
9 and 7 are 16

Copy and add. Remember the steps in problem solving:

- /. Mary wrote **25** words in her copybook and Joseph wrote **19** words. How many words did they both write?
- 2. There are 18 books on one desk and 26 books on another desk. How many books are there on both desks?
- 3. In the box there are 38 blue pencils and 17 red pencils. How many pencils are in the box?
- 4. We had 29 cents in our mission box. Tom put in 16 cents more. How much was in the box then?
- 5. If there are 27 boys in one room and 18 boys in another, how many boys are there in both rooms?
- 6. In one room there are 24 desks. In another room there are 39 desks. How many desks are there in both rooms?
- 7. In our room there are 59 books about God and 36 books about the Blessed Mother. How many books are there?
- 8. There are 37 pages in Mary's book and 46 pages in John's book. How many pages are in both?

Copy and add. Remember to write hundreds in the correct place:

MORE CARRYING FROM UNITS' PLACE

Α.

26 37 Add: 2 and 7 are 9, and 6 are 15. Write the 5 and carry the 1. 1+7 are 8, +3 are 11, +2 are 13. Write 13.

B.

Add the grown-up way. Say, "2, 9, 15." Write 5 in units' column, carry 1. Say, "1, 8, 11, 13." Write 3 in tens' column, and 1 in hundreds' place.

Add. Copy and remember to carry:

	10							
35	76	54	53	48	36	20	48	33
21	25	37	12	24	45	38	30	49
58	32	22	85	85	<u>44</u>	<u>48</u>	58	60
27	18	35	54	86	47	65	19	97
45	23	73	27	38	54	25	82	25
34	<u>45</u>	86	32	1		12	36	_2

Work these problems in your copybook:



/. On the farm there are 27 white chicks, 34 brown chicks and 19 black chicks. How many chicks are there altogether?



2. David sold 36 papers, John sold 23 papers, and Peter sold 85 papers. How many papers did the three boys sell?



3. Robert has 39 brown marbles, 12 yellow marbles, and 43 blue ones. How many has he altogether?



4. Mary Ellen read 45 pages of her new book on Monday, 58 pages on Tuesday, and 33 pages on Wednesday. How many pages did she read?



5. Harry had 75 cents in his bank. His father gave him 17 cents more. How many cents did he have then?

LEARNING ABOUT ROMAN NUMERALS



Have you ever seen numbers like those in the books the boys are reading?

Look at the numbers on the clock. They are different from our numbers. The numbers in this picture are called Roman numbers because they have come to us from the Romans of long ago. In this lesson you are going to learn something about the Roman number system.

The Romans used letters for numbers. Learn these Roman numerals.

I means / V means 5

X means 10

Now see how many Roman numbers are formed from them.

I after a number means / added to the number.

II means /+/ or 2. VI means 5+/ or 6. What does XI mean?

When you see II after a number it means 2 added to the number.

III means 1+2 or 3. VII means 5+2 or 7. What does XII mean?

III after a number means 3 added to the number.

VIII means 5+3 or 8. What does XIII mean?

In the Roman system I before a number means / subtracted from the number.

IV means / from 5 or 4. IX means / from 10 or 9.

If X means 10 and IV means 4, what does XIV mean?

If X means 10 and V means 5, what does XV mean?

If X means 10 and VI means 6, what does XVI mean?

If X means 10 and VII means 7, what does XVII mean?

If X means 10 and VIII means 8, what does XVIII mean?

If X means 10 and IX means 9, what does XIX mean?

If X means 10, what does XX mean?

Do you know what these Roman numbers mean?

XXI, XXII, XXIII, XXIV, XXV.

6 READING AND WRITING THOUSANDS

990	991	992	993	994	995	996	997	998	999
1000	1001	1002	1003	1004	1005	1006	1007	1008	1009
1010	1011	1012	1013	1014	1015	1016	1017	1018	1019
1020	1021	1022	1023	1024	1025	1026	1027	1028	1029
1030	1031	1032	1033	1034	1035	1036	1037	1038	1039
1040	1041	1042	1043	1044	1045	1046	1047	1048	1049
1050	1051	1052	1053	1054	1055	1056	1057	1058	1059
1060	1061	1062	1063	1064	1065	1066	1067	1068	1069
1070	1071	1072	1073	1074	1075	1076	1077	1078	1079
1080	1081	1082	1083	1084	1085	1086	1087	1088	1089
1090	1091	1092	1093	1094	1095	1096	1097	1098	1099
1100	1101	1102	1103	1104	1105	1106	1107	1108	1109

The number 999 is the highest number that has three figures. The next number is 1000. This is the first number that has four figures. 1000 is read, "One thousand." It means one thousand, no hundreds, no tens, no units.

When we write large numbers, we put a comma between the thousands and the hundreds, as 1,406.

Copy these numbers and put the comma in each:

1326 1156 2637 3105 2574 3691 2345 1579

What number	comes after?	What number	comes before?
999	1,082	1,103	1,011
1,004	1,095	1,080	1,097
1.009	1,108	1,056	1,107
1.099	1,034	1,083	1,062
1,100	1,090	1,102	1,044

7

READING AND WRITING THOUSANDS (CONTINUED)

The number 3205 means	thousands <i>3</i>	hundreds 2	tens O	units 5
Say the answers:				
4,763 means	?	?	?	?
2,340 means	?	?	?	?
6,209 means	?	?	?	?
5,0/4 means	?	?	?	?
7,004 means	?	?	?	?

3,245 is read, "Three thousand two hundred forty-five."

1,063 is read, "One thousand sixty-three."

4.206 is read, "Four thousand two hundred six."

6,002 is read, "Six thousand two."

Study the examples above. Then tell each of the following numbers:

6,279	3,420	8,965	9,075	8,/30	2,605
9,451	6,074	5,209	1,340	7,025	1,450
8,002	1,006	2,003	4,008	6,005	3,009

Write in figures in your copybook:

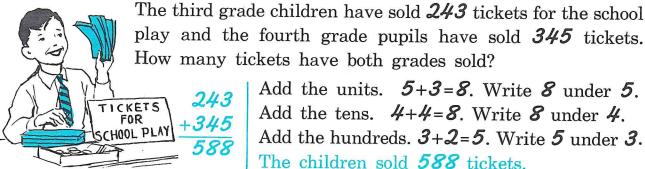
Three thousand six hundred forty-five • Two thousand nine hundred sixty-three • Four thousand two hundred thirty • Six thousand seven hundred eighteen • Eight thousand four hundred thirteen

9,999 is the highest number that has 4 figures. The next number is 10,000. This is the first number that has 5 figures. 10,000 is read, "Ten thousand."

In your copybook write the following figures:

Twelve thousand five hundred forty-five • Sixteen thousand four hundred seventy • Thirty-five thousand eight hundred four

THREE-PLACE NUMBERS IN ADDITION AND SUBTRACTION



Add the units. 5+3=8. Write 8 under 5. Add the tens. 4+4=8. Write 8 under 4. Add the hundreds. 3+2=5. Write 5 under 3. The children sold 588 tickets.

Copy and add:

Remember the grown-up way to add numbers like these:

Say, "3, 8." Write 8 in units' column in the sum. 425 Say, "1, 7, 9." Write 9 in tens' column. Say, "5, 6, 10." Write 0 in hundreds' column, and / in thousands' place.

Copy and add these numbers. Be careful to keep the columns straight, and to write each figure in the answer in its correct place:

			A STATE OF THE PERSON NAMED IN			
7/4	204	316	425	914	736	232
140	424	151	140	103	160	425
+/34	+470	+602	+5/4	+282	+202	+302

How many more tickets did the fourth grade sell than the third grade?

345 tickets -243 tickets 102 tickets

Subtract the units. 3 from 5 leaves 2. Write 2 under 3. Subtract the tens. 4 from 4 leaves 0. Write 0 under 4. Subtract the hundreds. 2 from 3 leaves 1. Write 1 under 2. The fourth grade sold /02 more tickets.

Copy and subtract:

CARRYING FROM TENS' PLACE

Add 573 and 354

573 /. Add the units. +354 2. Add the tens. 4 and 3 are 7. Write 7 under the 4. 5 and 7 are 12. (This is 12 tens).
12 tens equal 1 hundred and 2 tens.

Write 2 under the 5, and carry / to the

next column.

3. Add the hundreds. / carried an

/ carried and 3 are 4, and 5 are 9. Write 9 under the 3.

4, 7. Write 7.

5, *12*.

 $\frac{+354}{927}$ Write the 2 and carry the 1.

Write 9.

Copy and add:

 181 v

291 3: 657 2

273

 I 678

475 V

 340

340

Think:

- /. In our school there are 390 boys and 387 girls. How many children are in the whole school?
- 2. Tom's father drove /35 miles on Tuesday and /90 miles on Wednesday. How many miles did he drive in the 2 days?
- 3. A pilot flew his plane 360 miles one day and 470 miles the next day. How many miles was that?

10 CARRYING FROM UNITS' AND TENS' PLACES IN ADDITION

Add 2	85 and 367/. Add the units.	7 and 5 are 12. 12 units equal 1 ten and 2 units. Write 2 under the 7, and carry 1 to
285 367 652	2. Add the tens.	the next column. / carried and 6 are 7, and 8 are /5. /5 tens equal / hundred and 5 tens. Write 5 under the 6, and carry / to
	3. Add the hundreds.	the next column. / carried and 3 are 4, and 2 are 6. Write 6 under the 3.

			Copy and	add:	
		arry the I .	468 1. <u>279</u>	546 378	277 /85
652 Writ	te the 5 and 0 2 , 6 . te 6 .	earry the /.	785 2. 178	492 469 —	459 293
392 3. 289	258 367	198 278	476 294	869 154 —	489 459
579 4. 263	459 385	368 279	547 288	724	638 287
354 5. 289	387 466	275 347	684 198	276 397	358 285
659 6. 573	748 487	745 578	938 485	824 679	683 738 —
349 7. 781	658 745	928 475	796 464	485 817	718 493

BORROWING IN SUBTRACTION



LEARNING TO BORROW

Mother made 43 cookies. The children ate 25 of them. How many cookies were left?



We cannot take 5 units from 3 units. Borrow 1 ten from 4 tens. Remember, there are now only 3 tens instead of 4. Change the 1 ten borrowed to 10 units, and add them to the 3 units. Now you have 13 units.

43 cookies
-25 cookies
/8 cookies

5 from 13 leaves 8. Write 8 in the units' column.

2 tens from 3 tens leaves / ten.

Write / in the tens' column.

53 -27 26 6 is in the units' column because 7 from ? leaves ?

2 is in the tens' column because 2 from? leaves?

64 -45 19 9 is in the units' column because 5 from ? leaves ?

/ is in the tens'column because 4 from ? leaves ?

95 -38 57 7 is in the units' column because 8 from ? leaves ?

5 is in the tens' column because 3 from ? leaves ?

Copy and subtract:

these names! 95 minuend subtrahand remainder

64 -18

35 -19 56 -27

83 -35 ---- 7*1* -44 92 -53

86 -9 *44*–7

35¢ -26¢ 70¢ -25¢ 63¢ -17¢ 80¢ -26¢ 96¢ -28¢ 45¢ -7¢

74¢ -9¢ 524



Work the following problems. Name each part of the example:

/. In the two third grades, there are 43 girls and 39 boys. How many more girls than boys are there?

Minuend
-Subtrahend

Remainder

- 2. There are 82 children in the third grade. 67 of them take the bus every day. How many do not take the bus?
- 3. 35 boys went to Tim's Halloween party. 17 of them won prizes. How many did not win prizes?
- 4. Mother made 24 apple taffies. The children ate 6 of them. How many were left?
- 5. Sally Ann saved 28 cents. She gave 9 cents to a poor child. How much had Sally Ann then?

Subtract these numbers the quick way by looking at the endings. In each line the units' figures in the remainders will be the same. The tens' figures in the remainders will be one less than the tens' figures in the minuend. Why?

III the rema.	IIIucib Wii	i be one io	00 0110111				
/5 /8	25 -8	35 -8 —	45 -8	55 -8 	65 -8 	75 -8	85 -8
2. <u>-7</u>	26 -7	36 -7	46 -7	56 -7	66	76 -7	86 -7
18 3. <u>-9</u>	28 -9	38 -9	48 -9	58 -9	68 -9	78 -9	88 -9
/7 49	97 -9	47 -9	67 -9	27 -9	57 -9	87 -9	37 -9

3 SUBTRACTION WITH A ZERO IN THE MINUEND

We cannot take 4 units from no units.

We borrow / ten from 8 tens.

Now there are 7 tens and 10 units.

4 units from 10 units leaves 6 units.

Write 6 under 4.

3 tens from 7 tens leaves 4 tens.

Write 4 under 3.

Learn the grown-up way of subtracting.

80

4 from 10, 6. Write 6 under 4.

-34

3 from 7, 4. Write 4 under 7.

46

Subtract these numbers the grown-up way. Do the work in your copybook:

/. 20 	30	40	<i>50 4</i>	60	70	80 4	90
2. 20 14	30	<i>30 24</i>	40 14	40 24	40 34	50 4	50 14
3. 40 36	60 25	80 32	60 48	70 39	90	90	80 51
4. 30 21	50 27	70 68	80 26	20 15	40 27	50 19	90 32

Subtract the numbers in these problems:

- 1. Jean is 52 inches tall. Her brother is 60 inches tall. How much taller is Jean's brother than Jean?
- Paul weighs 60 pounds. Alice weighs 47 pounds. How much less does Alice weigh than Paul?
- Mr. Carroll drives **20** miles to work and Mr. Chapman drives **14** miles. How many more miles does Mr. Carroll drive than Mr. Chapman?

ADDITION AND SUBTRACTION REVIEW

Copy and add	d. Be car	reful whe	n you car	rry:			
/7 /. <u>38</u>	26 39	48 27	49 36	6	3 7 —	49 23	<i>57 35</i>
57 2. 65	48 72 —	64 68	85 97		57 84 —	48 56	82 49
26 37 3. 72	19 42 64	8 37 90	27 46 72	j á	40 27 8	59 7 62	28 14
574 4. 353	482 346		376 250	972 353		72 40	670 284
429 5. 195	543 288		349 372	245		65 47	254 378 ——
384 6. 269	549 384		635 469	542 478		58 79	729 567
		D b o	n how to	borrow			CONTRACTOR OF THE PERSON OF TH
27 /. /5	39 12	48 25	75 35	96 23	87 52	69 35	57 24
25 2. 7	35 8 —	43 26	67 18	53 24	7 <i>1</i> 24	6 / 52	45 29
74 3. 16	<i>54 47</i>	62 55	70 29	60 38	40 25	90 47	80 64
35¢ 4. 26¢	70¢ 25¢	63¢ 17¢	80¢ 26¢	96¢ 28¢	45¢ 7¢	74¢ 9¢	52¢ 6¢

BORROWING FROM TENS' PLACE

Ann saved 246 colored beads. She lost 7 of them. How many had she left? I cannot take 7 units from 6 units.

I borrow / ten from 4 tens. Now there are 3 tens and 16 units. 246

7 from 16 is 9. Write 9 under 7.

Nothing from 3 tens is 3 tens. Write 3 in tens' place. Nothing from 2 hundreds is 2 hundreds. Write 2 in hundreds' place.

246

-29

381

-27

483

-67

837 -263

847 -265

> 345 -84

Ann had 239 beads left.

Grown-up	way of subtracting:	Copy an	d subtract:	
523 6	6 from /3, 7 Nothing from /, /	628	<i>542</i> -7	463 -5
5/7	Nothing from 5, 5	368 -29	492 -34	273 -19
746	8 from 16, 8			-/7
-18 728	/ from 3, 2 Nothing from 7, 7	735 -18	576 -38	765 -29

Borrowing from hundreds:

3 units from 4 units leaves / unit. Write / under 3.

I cannot take 9 tens from 2 tens. I borrow / hundred from 6 624 hundreds. / hundred = 10 tens. Now there are 5 hundreds -193 and 12 tens. 9 tens from 12 tens leaves 3 tens. Write 3 under 9. 431 / hundred from 5 hundreds leaves 4 hundreds. Write 4 under /.

7			
Grown up way of subtracting:	Copy and	d subtract:	
456 4 from 6, 2 -94 9 from 15, 6 362 Nothing from 3, 3	<u>-82</u>	726 -63	54/
643 2 from 3, 1	958 -473 	679 -384	735 -462
-182 8 from 14, 6 461 1 from 5, 4	526 -263	4/8 -/73	659 -294

6 THREE PLACE NUMBERS IN SUBTRACTION

Remember:

Any number - itself = zero.

Any number - zero = the number.

Write in copybook and subtract:

618

409

625

617

763

-573

Subtract:

Subtract:

Subtract:

808 5 from 8, 3 -265 6 from 10, 4 543 2 from 7, 5

Subtract:

7 BORROWING FROM TWO PLACES

534 I cannot take 6 units from 4 units.

-/76 I borrow / ten from the 3 tens.

Now there are 2 tens and 14 units.

6 from 14 is 8. Write 8 under the 6.

I cannot take 7 tens from 2 tens. I borrow / hundred from

534 the 5 hundreds. Now there are 4 hundreds and 12 tens.

-176 7 from 12 is 5. Write 5 under the 7.

358 / from 4 is 3. Write 3 under /.

Practice the grown-up way:

A. 563 7 from 13?

-287 8 from 15?

276 2 from 4?

B. 748 9 from 18?

-379 7 from 13?

369 3 from 6?

Copy and find the remainders:

436	52/	745	862	948	853
-178	-265	-479	-588	-369	-176
673	954	438	72/	545	374
-295	-387	-169	-475	-98	-88

Work these problems. Remember the steps:

- /. There were 954 people at the 10 o'clock Mass and only 476 people at the 7 o'clock Mass. How many more were at the 10 o'clock Mass than at the 7?
- 2. There were 320 people at Mass. 285 of them were children. How many were not children?
- 3. A farmer had 346 sheep. He sold 178 of them. How many sheep had he left?
- 4. There are 497 boys in the school. There are 398 girls. How many more boys than girls are there in school?

ZEROS IN SUBTRACTION

S	ubtract:	
700	7 from	
-247	# from	9, 5
453	2 from	6, 4

Subtract: 600	500	800	700	900
-452	-327	-379	-428	
200	300	400	600	500
-164	-276	-382	-475	-168
70 /	504	603	408	902
-462	-278	-458	-219	-346
805	30/	403	607	704

Subtract:					
604	9 from	14, 5			
-269	6 from	9, 3			
335	2 from	<i>5</i> , <i>3</i>			

UNITED STATES MONEY





/ nickel 5¢ \$.05



805

/ dime 104 \$.10



/ quarter 254 \$.25



289

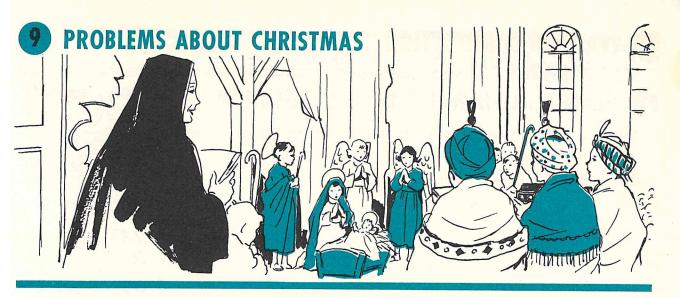
/ half-dollar 504 \$.50

/0 cents=/ dime
$$50$$
 cents = $\frac{1}{2}$ dollar /0 dimes=/ dollar 25 cents = $\frac{1}{4}$ dollar /00 cents=/ dollar

The sign f means cent or cents. The sign f means dollar or dollars. We separate the dollars from the cents by a period. This period is called a decimal point. We say "and" for the period when we read dollars and cents. To read \$1.35 say, "One dollar and thirty-five cents." To read \$0.19 say, "Nineteen cents." To read \$0.05 say, "Five cents." To read \$1.05 say, "One dollar and five cents."

Read aloud:

Read alou	iu.				40 65	\$107
\$2.56	\$9.08 \$4.00	\$5.04 \$7.32	\$15.37 \$25.30	\$19.06 \$27.05	\$0.07	\$1.10



Work these problems. Remember the steps:

- /. Because Jane loved the Infant Jesus, she brought 36¢ one day for the poor and 27¢ the next day. How much did Jane bring?
- 2. Alice saved 75¢ for the Christmas collection. She lost /5¢. How much had she left for the collection?
- 3. In our Christmas play 17 third grade boys and 28 fourth grade boys sang Christmas hymns. How many boys sang?
- 4. Our class charged /0¢ to see the Christmas play. How much did 5 first grade children pay?
- 5. Tom's mother gave him 90¢ to buy stars for the play. He spent 65¢. How much did he have left?

- 6. Peter had 9 lines to say in the play. Ann had 4 times as many lines. How many lines did Ann have to say?
- 7. There were 39 third grade girls in one part of the play and 38 third grade boys. How many children were there in all?
- 8. Mary saved 88¢. She spent 20¢ for bells for the play. How much had she left?
- 9. Michael sold 34 tickets for the play and Paul sold 38 tickets. How many tickets did they both sell?
- /O. Helen gave the Infant 5 cents a week. How much did she give in 9 weeks?

UNIT SEVEN:

NEW STEPS IN MULTIPLICATION

1 THREE-PLACE NUMBERS IN MULTIPLICATION

Peter's father took a trip in an airplane. If the speed of the plane was 23/ miles each hour, how far did Peter's father go in 3 hours?



You may find the answer by adding the numbers.

23/ miles 23/ miles 23/ miles 693 miles

A shorter way to find the answer is to multiply.

$$3 \times 1 = 3$$
 Write 3 in units' place in the product.
 $3 \times 3 = 9$ Write 9 in tens' place in the product.

$$3\times2=6$$
 Write 6 in hundreds' place in the product.

Copy and multiply. Remember to begin in units' place to multiply. If the answer is more than 999, be sure to write each figure in its correct place:

342
$\times 2$

204

 $\times 2$

402

 $\times 2$

Multiply and keep the proper places in mind:

$$403$$
 $2 \times 3 = 6$
 Write 6 under 2.

 $\times 2$
 $2 \times 0 = 0$
 Write 0 under 0.

 806
 $2 \times 4 = 8$
 Write 8 under 4.

202

 $\times 4$

620
$$4\times0=0$$
 Write 0 under 4.
 $\times4$ $4\times2=8$ Write 8 under 2.
2,480 $4\times6=24$ Write 24.
Put 4 under 6 and 2 in the next place to the left.

CARRYING IN MULTIPLICATION



We are having a party in our room, and we need 54 plates. Helen bought 3 packages with 18 plates each. Do you think we have enough plates? We can find out by addition and by multiplication.

Think: 3×8 are 24.

24 cannot be written in units' column.

Write the 4 of the 24 under 3 and carry the 2 to the tens' column.

Think: 3×1 are 3 and 2 to carry are 5. Write 5 in the tens' column.

Work these examples in your copybook:

24	16	/5	23	37	29	45	26	/8
/. ×4	×4	×4	×4	×2	×3	×2	×3	×3
27	46	/9	48	/7	/5	/6	39	54
2. ×3	×2	×4	×2	×4	×5	×3	×4	×3
56	34	68	55	67	47	84	94	73
3. ×3	×3	×2	×4	×4	×5	×5	×5	×4

Do the following problems and remember each of the steps:



/. How much will 2 pounds of cake cost at 37 cents a pound?



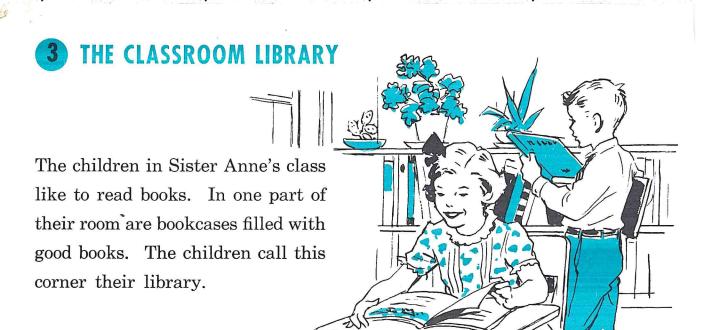
2. Bill sells 76 papers each day. How many will he sell in 4 days?



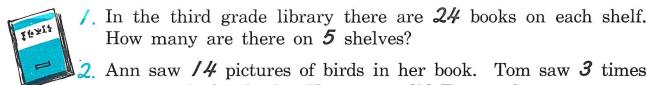
3. In our school we have 37 Brownies and 4 times that many Girl Scouts. How many Girl Scouts are there?



4. Mary's father drives 28 miles each day. How many miles does he drive in 5 days?



Think of the steps to follow and do these examples in your copybook:



EMELLEH

2. Ann saw 14 pictures of birds in her book. Tom saw 3 times as many in his book. How many did Tom see?

3 Frank can read 19 pages of his story book in a day. How many pages can he read in 4 days?

4. Jane has read 18 stories this year. May has read 4 times as many. How many has May read?

5. Sister bought 5 sets of books for the school library. In each set there were **28** books. How many books did Sister buy?

6. We have 37 animal stories in our library. The fourth grade has 3 times as many. How many has the fourth grade?

7. Dad bought 4 picture books for my little brother. In each book there are 29 pictures. How many pictures are there in all?

8. If each pupil in our room covers 5 books, how many covers does Sister need for 37 pupils?

9. Bob keeps his stamps in a stamp book. He has 36 stamps on each page. How many has he on 4 pages?

4

6'S IN MULTIPLICATION AND DIVISION

Mother has just baked cookies. How many plates are on the table? How many cookies are on each plate? If Jane takes / plateful for her friends, how many cookies will she take? John wants 3 full plates for his friends. How many cookies does he want?

One	6 is 6	1×6= 6	How many 6's in 6?
Two	6 's are 12	2×6=12	How many 6's in /2?
Three	6's are 18	3×6=18	How many 6's in 18?
Four	6 's are 24	4×6=24	How many 6's in 24?
Five	6 's are 30	5×6=30	How many 6 's in 30 ?
Six	6's are 36	6×6=36	How many 6 's in 36 ?
Seven	6 's are 42	7×6=42	How many 6 's in 42 ?
Eight	6's are 48	8×6=48	How many 6's in 48?
Nine	6's are 54	9×6=54	How many 6 's in 54 ?
Ten	6's are 60	10×6=60	How many 6's in 60?
Eleven	6's are 66	//×6=66	How many 6's in 66?
Tewlve	6's are 72	12×6=72	How many 6 's in 72 ?

Practice in multiplication and division facts. Say the answers:

6 ×/	6/6	×10	6)60	×8	6 48	×6 	6)36
6 ×4	6)24	6 ×2	6/12	6 ×//	6)66	6 ×9	6\ <u>54</u>
6 ×7	6)42	6 ×5	6)30	6 ×3	6)18	6 ×/2	6)72

MULTIPLICATION FACTS IN PAIRS

Say the answers:

 $2\times6=/2$ and $6\times2=/2$ $8 \times 6 = ?$ and $6 \times 8 = ?$ *3*×6= ? $9\times6=?$ and $6 \times 9 = ?$ and $6 \times 3 = ?$ $4 \times 6 = ?$ and $6 \times 4 = ?$ 10×6= ? and $6 \times 10 = ?$ $5\times6=$? and $6\times5=$? 1/x6=? and 6x//=? 7×6= ? and $6 \times 7 = ?$ $/2 \times 6 = ?$ and $6 \times /2 = ?$

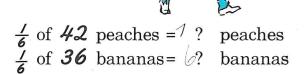
DIVISION FACTS IN PAIRS

Say the answers:

$$12 \div 6 = 2$$
 and $12 \div 2 = 6$
 $48 \div 6 = ?$ and $48 \div 8 = ?$
 $18 \div 6 = ?$ and $18 \div 3 = ?$
 $54 \div 6 = ?$ and $54 \div 9 = ?$
 $24 \div 6 = ?$ and $24 \div 4 = ?$
 $60 \div 6 = ?$ and $60 \div 10 = ?$
 $30 \div 6 = ?$ and $30 \div 5 = ?$
 $66 \div 6 = ?$ and $66 \div 1/ = ?$
 $42 \div 6 = ?$ and $42 \div 7 = ?$
 $72 \div 6 = ?$ and $72 \div 12 = ?$



TO FIND $\frac{1}{6}$ OF A NUMBER, DIVIDE THE NUMBER BY 6



$\frac{1}{6}$ of 12 apples = $\frac{1}{2}$? apples $\frac{1}{4}$ of $\frac{24}{9}$ pears = $\frac{1}{3}$? pears

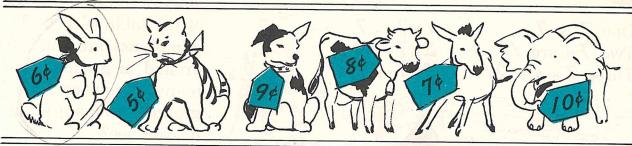
Stories of multiplication and division facts. Give the answers:

/. 3×6= ?	2. 5×6=?	3. 7×6=?	4 . 9 × 6 = ?
6 × 3 = ?	6 × 5 = ?	6 ×7= ?	6 × 9 = ?
18÷6= ?	<i>30</i> ÷ <i>6</i> = ?	42 ÷ 6 = ?	<i>54</i> ÷ <i>6</i> = ?
<i>18÷3</i> = ?	<i>30</i> ÷ <i>5</i> = ?	42 ÷ 7 = ?	<i>54÷9=</i> ?
<u>/</u> 6 of /8= ?	$\frac{7}{6}$ of $30 = ?$	$\frac{1}{6}$ of $42 = ?$	$\frac{1}{6}$ of $54 = ?$

Write the stories. Add the new facts:

 7×6 5×6 9×6 4×6 8×6 10×6 2×6 3×6





When you know the cost of / thing and you want to know the cost of 2 or more things of the same kind, MULTIPLY.

When you know the cost of / thing and how much money you have, DIVIDE to find how many things you can buy.

John and his friends like to visit the store where toy animals are sold. They buy toy animals and play games with them.

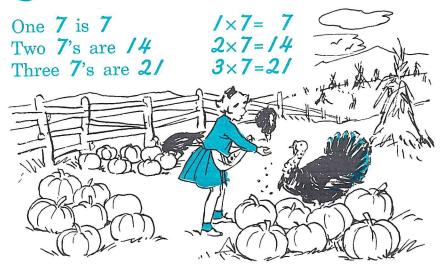
- /. John bought 6 toy horses. How much did they cost?
- 2. If Mary buys 4 toy rabbits, how much will they cost?
- 3. How much will Tom have to pay for 5 brown cows?
- 4. Joan wants 3 cats for her game. What must she pay?
- 5. How much will Rob pay for 2 elephants?

- 6. Sally has 54 cents. How many rabbits can she buy?
- 7. Billy has **24** cents to buy cows. How many can he buy?
- 8. Lilly saved 35 cents for cats. How many cats can she buy?
- 9. Peter wants elephants. How many can he buy for 50 cents?
- /O. Bernard has 45 cents to buy toy dogs. How many can he buy?

Do these examples for practice:

	The state of the s	The state of the s	- COULCO.					
16	26	36	46	56	66	76	86	96
×6	×3	×5	×4	×5	×3	×4	×6	×2
80 -47	90 -53	<i>44</i> - <i>16</i>	96 -48	52 -26	77 -29	38 -19	83 -57	91
435	602	52/	400	146	730	/05	621	398
-286	+598	-/36	-225	+687	-385	+577	-394	+786

7 TABLE OF 7'S



This picture tells the story of some of the facts of the table of **7**'s. The pumpkins are on the ground in groups. How many do you see in each group? How many groups do you see?

Eleven 7's are 77	$9 \times 7 = 63$ In 63 there are	? ? ? ? ?	7's 7's 7's 7's 7's	9×7=? 5×7=? 8×7=? /0×7=? /2×7=? 6×7=? /1×7=? 7×7=? 4×7=?
-------------------	-------------------------------------	-----------------------	---------------------------------	--

Practice drill on the multiplication and the division facts of the table of 7's.

Say the answers. Make sure of these:

$$1 \times 7 = ?$$
 $8 \times 7 = ?$
 $10 \times 7 = ?$
 $5 \times 7 = ?$
 $8 \times 7 = ?$
 $9 \times 7 = ?$
 $4 \times 7 = ?$
 $7 \times 7 = ?$
 $12 \times 7 = ?$
 $6 \times 7 = ?$
 $6 \times 7 = ?$
 $3 \times 7 = ?$
 $1 \times 7 = ?$
 $2 \times 7 = ?$
 $9 \times 7 = ?$

MULTIPLICATION FACTS IN PAIRS

Learn these facts in pairs:

$$2 \times 7 = 14$$
 and $7 \times 2 = 14$

$$3\times7=$$
? and $7\times3=$?

$$4\times7=$$
? and $7\times4=$?

$$5\times7=$$
? and $7\times5=$?

$$6 \times 7 = ?$$
 and $7 \times 6 = ?$

$$8 \times 7 = ?$$
 and $7 \times 8 = ?$

$$9 \times 7 = ?$$
 and $7 \times 9 = ?$

$$10 \times 7 = ?$$
 and $7 \times 10 = ?$

Practice these division facts in pairs:

$$/4 \div 7 = 2$$
 and $/4 \div 2 = 7$

$$2/\div 7 = ?$$
 and $2/\div 3 = ?$

$$28 \div 7 = ?$$
 and $28 \div 4 = ?$

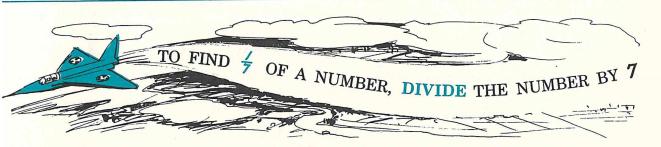
$$35 \div 7 = ?$$
 and $35 \div 5 = ?$

$$42 \div 7 = ?$$
 and $42 \div 6 = ?$

$$56 \div 7 = ?$$
 and $56 \div 8 = ?$

$$63 \div 7 = ?$$
 and $63 \div 9 = ?$

$$70 \div 7 = ?$$
 and $70 \div /0 = ?$



$$\frac{1}{7}$$
 of $49 \neq = ? \neq$

$$\frac{1}{7}$$
 of $28\% = ?\%$

$$\frac{7}{7}$$
 of $/4$ marbles=? marbles

$$\frac{1}{7}$$
 of 35 eggs = ? eggs

$$\frac{1}{2}$$
 of $\frac{2}{1}$ taffies = ? taffies

Tell the stories of multiplication and division facts:

$$3\times7=?$$
 $7\times3=?$

$$=?$$
 $6 \times 7 = ?$

$$6 \times 1 = ?$$
 4×1 $7 \times 6 = ?$ 7×4

$$9\times7=?$$

$$\frac{1 \times 3}{2} = ?$$

$$7 \times 6 = ?$$

 $42 \div 7 = ?$

$$7 \times 4 = ?$$

$$2/ \div / = ?$$

 $2/ \div 3 = ?$

$$\frac{42}{7}$$
 of $42 = ?$

Write the story. Don't forget the new fact:

Review:

$$4 \times 8 + 2 = ?$$

$$6\times7+5=?$$

$$6 \times 8 + 4 = ?$$

$$7 \times 1 + 3 = ?$$

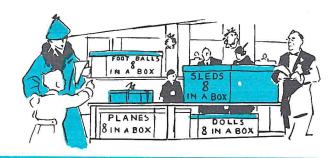
$$4 \times 6 + 3 = ?$$

 $7 \times 6 + 4 = ?$

$$4 \times 9 + 2 = ?$$

 $7 \times 9 + 6 = ?$

8'S IN MULTIPLICATION



Bobby's mother took him to see the toys in a big store. Here he saw many bells. He counted 8 and 8 and 8 of them. Bobby said, "8+8+8=24. That means three 8's are 24."

Then he saw big boxes marked:

Sleds, 8 in a box Trains, 8 in a box

Footballs, 8 in a box Airplanes, 8 in a box Doll houses, 8 in a box

Dolls, 8 in a box

Remember this rule:

When you know how many there are in one group, and you want to find how many there are in 2 or more groups, you multiply.

How many sleds were in 4 boxes? 32, because $4 \times 8 = 32$ How many airplanes were in 5 boxes? because $? \times ? = ?$ How many large dolls were in **6** boxes? because ?x?=?

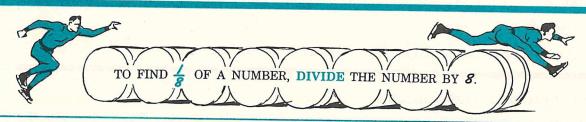
/×8 ·8
2×8=16
3×8=24
4×8=32
5×8=40
6×8=48
7×8=56
8×8=64
$9\times8=72$
10×8=80
//×8=88
12×8=96

10 USING 8'S IN MULTIPLICATION AND DIVISION

In 8 there is . ? 8	8/8	In 56 there are ? 8 's	8)56
In /6 there are 28's	8/16	In 64 there are ? 8 's	8 64
In 24 there are ?8's	8 24	In 72 there are ? ' 8 s	8 72
In 32 there are ? 8 's	8 32	In 80 there are ? 8 's	8 80
In 40 there are ? 8's	8)40	In 88 there are ? 8's	8 88
In 48 there are ?8's	8 48	In 96 there are ? 8 's	8 96

Say the answers:

$8 \div 8 = ?$ and $8 \div / = ?$ $72 \div 8 = ?$ and $72 \div 9 = ?$ $8 \times ?$	= 72
$16 \div 8 = ?$ and $16 \div 2 = ?$ $32 \div 8 = ?$ and $32 \div 4 = ?$ $8 \times ?$	
$24 \div 8 = ?$ and $24 \div 3 = ?$ $48 \div 8 = ?$ and $48 \div 6 = ?$ $8 \times ?$	
$56 \div 8 = ?$ and $56 \div 7 = ?$ $40 \div 8 = ?$ and $40 \div 5 = ?$ $8 \times ?$	• .



/ ₈ of 64=?	/s of 72=?	/ ₈ of 80=?	⅓ of 32 =?	$\frac{1}{8}$ of 24 =?
/8 of 40=?	/8 of /6=?	/ ₈ of 8=?	\$ of 48=?	/s of 56=?

Copy and write the stories:

<i>5</i> × <i>8</i> =?	7×8=?	9×8=?	6×8=?	4×8=?
8 × 5 =?	8×7=?	8×9=?	8×6=?	8×4=?
<i>40 :-8=</i> ?	<i>56</i> ÷ <i>8</i> =?	<i>72÷8</i> =?	48÷8=?	<i>32</i> ÷ <i>8</i> =?
<i>40</i> ÷ <i>5</i> =?	<i>56</i> ÷7=?	72 ÷ 9 =?	48÷6=?	32÷4=?
g of 40 =?	// of 56=?	$\frac{1}{8}$ of $72 = ?$	½ of 48=?	½ of 32=?
2 222				

Orill:

Work each problem. Use the steps you have learned:

- /. At 5¢ a box, how much will 8 boxes of candy cost?
- 2. At 8¢ a box, how much will 6 boxes of crayons cost?
- 3. Mother made 8 pans of fudge. There were 9 pieces in each pan. How many pieces did she make altogether?
- 4. At 6 cents each, how many pencils can Tom buy for 48¢?
- 5. John has 8 groups of soldiers, with 5 soldiers in each group. many soldiers does he have?
- 6. At 4 cents each, how much will 8 cards cost?
- 7. At 8 cents each, how many candy trees can Grace buy for 56 cents?
- 8. Ted has 8 boxes of candy toys for the party. In each box there are 12toys. How many are there in all?
- 9. Marie saved 8 cents a week. How many weeks did it take to save 64 cents?
- /O. At 8 cents a soldier, how many can John buy for 72 cents?

Think and give the answers:

$$8\times4+7=?$$
 $8\times5+6=?$

44

$$\frac{\cancel{3,720}}{\cancel{3,720}}$$
 Product

$$\frac{\times 8}{}$$
 $\frac{\times 8}{}$ $\frac{\times 8}{}$ $\frac{\times 8}{}$

923

 $\times 3$

410

×8

721

 $\times 3$

 $\times 2$

60

822

 $\times 4$

56

×4

THE CALENDAR

FEBRUARY



SUN. SUNDAY	MON.	TUES.	WED. WEDNESDAY	THUR. THURSDAY	FRI.	SAT. SATURDAY
<u> </u>						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	



LINCOLN

1	т.
/ .	January

WASHINGTON

5. May

9. September

7 days =/ week

6. June

10. October //. November

weeks =/ month

3. March

7. July

12. December

4. April

8. August

/2 months=/ year

Say the answers:

Our Lady's Feast in on February? Saint Valentine's Day is on February? Washington's Birthday is on February? Lincoln's Birthday is on February?

There are? days in / week. There are? weeks in / month. There are? months in / year. There are ? days in February.

Say the missing words:

The second of February is on Sunday. The twenty-second of February is on? The twenty-fifth of February is on?

The eighteenth of February is on? The fourteenth of February is on?

The twelfth of February is on?

The last day of February is on?

The second month of the year is?

'uesday is between Monday and?

'he first day of the week is?

ri. stands for ?

he day all Catholics keep holy is?



UNIT EIGHT:

1

WRITING DOLLARS AND CENTS

Write in numbers: Five dollars and twenty-five cents.

In writing numbers that mean dollars and cents:

First, write the dollar sign

Then, the number of dollars \$5

Then, the period or decimal point \$5.

Then, the cents \$5.25



Study the above rules and write the following amounts of money:

Three dollars and twenty-seven cents	\$3.27	Two dollars	\$2.00
Nine dollars and thirty-five cents	?	Three dollars	?
Two dollars and fifty-three cents	?	Nine dollars	?
Eight dollars and fifty-four cents	?	Six dollars	?
Four dollars and sixty-two cents	?	Eight dollars	?
One dollar and ninety-eight cents	?	Four dollars	?
Five dollars and sixty-nine cents	?	Ten dollars	?

When there are no dollars as in 70 cents, we write \$0.70 or \$.70. 4 cents is written \$0.04 or \$.04.

Write these amounts of money:

TALL CONTRACTOR NATIONAL PROPERTY OF THE PERSON NATIONAL PROPE					The second secon	
15 cents	\$.15	85 cents ?	$\boldsymbol{\mathcal{S}}$ cents	\$.03	/00 cents	\$1.00
27 cents	?	74 cents ?	7 cents	?	/40 cents	?
34 cents	?	98 cents ?	/ cent	?	/50 cents	?
18 cents	?	62 cents ?	8 cents	?	/70 cents	?
<i>35</i> cents	?	90 cents ?	9 cents	?	160 cents	?

Tell what each amount of money means: |

\$2.50 means ? dollars ? cents

\$3.05 means ? dollars ? cents

\$4.21 means ? dollars ? cents

For a quarter I can get:

? dimes and / nickel

? dime and **3** nickels no dimes and ? nickels

grande en la despetación de la companya de la comp

2 ADDING DOLLARS AND CENTS



Bob's new sweater cost \$2.49 and his overcoat cost \$9.75. How much did they both cost?

When you are adding dollars and cents, remember:

- /. Put the decimal points under one another.
- 2. Put the decimal point in the answer under the other decimal points.
- 3. Put a dollar sign before the number at the top of the column and also before the sum.

Copy and add. Remember the above rules:

		CILC CITO	above ruics	•		
\$2.75 4.59	\$6.48	\$4.27 8.09	\$9.76 5.29	\$3.84 7.19	\$6.51	\$7.63 8.69
\$4.73 3.68	\$6.26 4.08	\$7.04 6.78	\$9.37 2.58	\$5.45 2.38	\$3.28 7.08	\$8.09 6.48



\$5.65 6.25 4.58 \$16.48

Mary's shoes cost \$5.65, Bob's cost \$6.25, and Betty's cost \$4.58. What did they all cost?

Practice finding the sum. Write in your copybook:

	0	V/1100	Jill your	copy book.		
\$3.25	\$9.18	\$2.49	\$3./5	\$1.37	\$6.00	\$4.98
4.98	2.40	9.54	/.35	4.86	2.49	6.00
7.16	6.75	3.18	4.76	2.50	1.68	9.25
\$6.00	\$7.25	\$.45	\$.78	\$.69	\$.92	\$.97
.79	.69	9.62	.96	.45	.86	.45
.54	4.86	4.79	6.25	.38	.27	.08

3 SUBTRACTING DOLLARS AND CENTS



Bill has saved \$1.65. He spends \$1.49 for his mother's birthday present. How much has he left?

In subtracting dollars and cents, remember:

- /. Put the decimal points under one another.
- 2. Put the decimal point in the answer under the other decimal points.
- 3. Put a dollar sign before the number at the top of the column and before the remainder.

*	1.	6	5
_	1.	4	9
,5	0	1	6

Copy and subtract:

To find how much more you subtract. To find how much less you subtract.

- /. Sarah has \$1.69. She wants to buy a doll that will cost \$1.95. How much more does she need?
- 2. The Boy Scouts saved \$5.65. The Cubs saved \$3.75. How much more did the Scouts save than the Cubs?

- 3. One set of trains will cost Bill \$8.99. Another will cost Bob \$6.75. How much more will Bill spend than Bob?
- 4. Rose has \$2.35. Mary has \$1.27. How much less than Rose has Mary?
- 5. Jim has \$3.60. Jerry has \$4.20. How much less than Jerry has Jim?
- 6. Alice has \$1.65. Nan has \$1.48. How much less than Alice has Nan?
- 7. Mary has \$4.87. John has \$3.62. How much less than Mary has John?

MULTIPLYING DOLLARS AND CENTS

Father is buying new chairs for the kitchen. If the chairs cost \$6.28 each, what will 3 cost?

5 6.28 Multiplicand $\times 3$ \$18.84 Product

6.28 6.28 6.28 \$18.84

- In multiplying dollars and cents, remember:
- /. Put a dollar sign before the multiplicand and before the product.
- 2. Put a decimal point in the multiplicand and in the product.
- 3. See that you have two places to the right of the decimal point to show cents.

\$.35 $\times 3$ \$1.05

Check by

Addition

Copy and multiply: \$.46 \$.39

Copy and remember the rules:

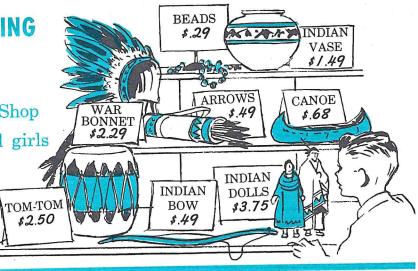
- /. What will 3 pairs of skates cost at \$2./5 a pair?
- 2. Find the cost of 6 baseball suits at \$7.15 each.
- 3. Don works after school. He earns \$.45 a day. What will he earn in 6 days?
- 4. What will Helen's mother pay for 7 pairs of stockings at \$1.12 a pair?

Copy and add:

JOP3	ullu
24	
10	
35	
26	

5 PROBLEMS IN BUYING

This make-believe Indian Shop has many things boys and girls like. Work the problems, using the steps you have learned.



- /. Mother bought Terry a war bonnet and a tom-tom. How much did she pay for both of them?
- 2. Dad bought Sally Ann an Indian doll and a string of beads. How much did he pay for both of them?
- 3. How much more will a canoe cost than a string of beads?
- 4. Jim saved \$2.75. If he buys a vase for his mother, how much will he have left?
- 5. Mr. Burns wants to buy a small canoe for each of his 4 boys. How much will they cost?
- 6. Ned needs 3 war bonnets for his show. How much money will he need to pay for them?

Copy and work:

Copy and add:

46	
22	
15	
9	
40	

35

UNIT NINE:

HARDER STEPS IN MULTIPLICATION AND DIVISION

(1) CARRYING FROM UNITS' PLACE IN MULTIPLICATION

7/6 ×4	$4 \times 6 = 24$. Write 4, carry 2. $4 \times 1 = 4$ and 2 carried are 6.
2,864	Write 6. 4×7=28. Write 28.

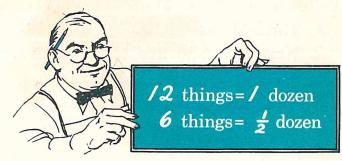
	1.	827 ×3	9/8 ×2
	524	3/8	615
2.	×4	×5	×4
	916	7/8	916
<i>3</i> .	×5	×5	×6

4.	8/5	4/9	6/4	2/9	8/7	728	2/9	3/4	5/8
	×6	×5	×7	×4	×5	×3	×2	×3	×2
5 .	624	824	924	418	579	927	5/6	828	7/5
	×4	×4	×3	×4	×3	×3	×3	×3	×4

Think and say the answers:

When we buy oranges, bananas, or lemons, we ask the storekeeper for / dozen or ½ dozen.

- /. If we buy / dozen oranges, we receive? oranges.
- 2. If we buy ½ dozen oranges, we receive? oranges.



- 3. John's mother wants 2 dozen bananas. How many will she buy?
- 4. Mrs. Brown bought 3 dozen lemons. How many did she buy?
- 5. Mollie bought 4 dozen buns. How many did she buy?
- 6. Susan bought f dozen apple tarts. How many did she buy?
- 7. How many cookies are there in 5 dozen?
- 8. How many eggs are there in 4 dozen?
- 9. How many rolls are there in $\frac{1}{6}$ of a dozen?

2 CARRYING FROM TENS' PLACE IN MULTIPLICATION

If an airplane goes 292 miles in / hour, how far will it go in 4 hours?

292 miles $4\times2=8$. Write 8 under 4.

 \times 4 $4\times9=36$. Write 6 under 9 and carry 3.

7/68 miles $4 \times 2 = 8$ and 3 carried are //. Write / under 2 and the other / in thousands' place.

The plane will go /,/68 miles in 4 hours.

Copy and multiply:

10	1 0					
782	673	782	962	542	832	961
/. ×3	×3	×4	×4	×4	×4	×5
831	721	641	581	361	541	270
2. ×5	×5	×5	×5	×6	×6	×6
861	440	341	651	960	680	<i>550</i>
3. ×6	×6	$\times 7$	×7	$\times 7$	$\times 7$	$\times 7$

Write in figures in your copybook:

- /. Three thousand two hundred four
- 2. Nine thousand five hundred seven
- 3. Eight thousand three hundred nine
- 4. Four thousand six hundred two
- 5. Six thousand one hundred twelve
- 6. Seven thousand nine hundred thirteen
- 7. Ten thousand six hundred fifteen
- 8. Nineteen thousand twenty-five
- 9. Sixteen thousand ninety-six
- 10. Twelve thousand four hundred
- //. Thirteen thousand five hundred
- /2. Fifteen thousand sixty-nine
- /3. Eleven thousand three hundred
- /4. Fourteen thousand nine hundred

What does each Roman number mean?

XX	XIV
III	IX
VI	II
XIX	XIII
IV	XI
V	I
VIII	XVI
XV	VII
X	XII
XVII	XVIII

3 CARRYING FROM UNITS' AND TENS' PLACES IN MULTIPLICATION

237 $4\times7=28$ Write 8 under 4 and carry 2.

 $4\times3=12$ and 2 carried are 14. Write 4 under 3 and carry 1. ×4

 $4\times2=8$ and / carried are 9. Write 9 under 2.

Multiply:

234	/63	279	284	179	/72	/95	147
×3	×4	×3	×3	×4	×6	×5	×6
365	/78	/42	/57	/56	184	/68	/69
×2	×5	×5	×6	×5	×7	×5	×3

627 $4 \times 7 = 28$ Write 8 under 4 and carry 2.

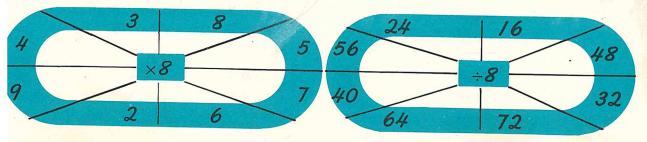
 \times 4 $4\times2=8$ and 2 carried are 10. Write 0 under 2; carry 1.

 $4\times6=24$ and / carried are 25. Write 5 under 6

and 2 in thousands' place.

534	648	754	973	826	435	937	347
×3	×3	×5	×5	×5_	×8	×8	×4
637	428	956	734	852	647	826	422
×6	×6	×6	×7	17	×8	×8	×8
963	834	852	456	429	569	636	724
×7	×7	×7	×7	×7	×8	×8	×8

A game to play



MIDDLE ZERO IN MULTIPLICAND

506 <u>×7</u> 3542		7~n- n	Write 2 under 7 . Carry 4 . and 4 carried are 4 . Write 4 under 0 . Write 5 under 5 and 3 in thousands' place.
--------------------------	--	--------	--

Come and man	ltiply				•
Copy and mu 706	504	309	305	708	604
/. ×4	×4	<u>×4</u>	×5	×5	×5
907 2. ×5	604 ×5	509 ×6	703 ×6	902 ×6	806 ×6
304 3. ×7	607 ×7	209 ×7	809 ×7	508 ×7	406 ×8
809 4. ×8	405 ×8	708 ×8	407 ×8	903 _×8 	703 ×8
905 5. ×3	603 ×4	702 ×6	804 ×8	607 ×5	708 ×7

iow of all types of multiplication. Test yourself:

Review of al	I types of mo	(101)11Cautoit.	1 CDU J COLLEGE		
45	39	59	86	95	78
/. ×2	$\frac{\times 2}{}$	×3	$\times 4$	$\times 4$	×4
7. 7.00				7.0	001
210	321	423	<i>703</i>	7/0	901
2 ×5	$\times 4$	×3	$\times \mathcal{3}$	×5	_×5
					100
791	980	841	891	570	690
3. ×6	×6	× 6	×6	×6	<u>×7</u>
	:				540
001	007	6111	5/3	635	549

806 4. ×7	907 ×7	6/4 ×7	5/3 ×7	635 ×8	549 ×8
720	076	457	365	928	542

738 ×6 5. ×8

5 FUN WITH 9'S



Four 9's are 36 Seven 9's are 63 Ten 9's are 90 Five 9's are 45 Eight 9's are 72 Eleven 9's are 99 Six 9's are 54 Nine 9's are 81 Twelve 9's are 108

/×9= 9 2×9= 18 3×9= 27 4×9= 36 5×9= 45 6×9= 54 7×9= 63 8×9= 72 9×9= 81 10×9= 90 1/×9= 99 12×9=108

Say the answers:

One	9	is	?	9)	9
Two	9's	are	?	9	18
Three	9 's	are	?	9)	27
			-		-

$$/\times 9 = ?$$
 and $9 \times / = ?$
 $2 \times 9 = ?$ and $9 \times 2 = ?$
 $3 \times 9 = ?$ and $9 \times 3 = ?$
 $4 \times 9 = ?$ and $9 \times 4 = ?$

9

×4

$$5 \times 9 = ?$$
 and $9 \times 5 = ?$
 $6 \times 9 = ?$ and $9 \times 6 = ?$
 $7 \times 9 = ?$ and $9 \times 7 = ?$
 $8 \times 9 = ?$ and $9 \times 8 = ?$

$$9 \times 6 = ?$$
 and $6 \times 9 = ?$
 $9 \times 4 = ?$ and $4 \times 9 = ?$
 $9 \times 7 = ?$ and $7 \times 9 = ?$
 $9 \times 8 = ?$ and $8 \times 9 = ?$

See how quickly you can tell the answers:

Divide and prove that your answers are correct:

6 MORE 9'S IN MULTIPLICATION AND DIVISION

Say the answers:

$9 \div 9 = ?$	and	$9 \div ? = 9$	<i>54</i> ÷ <i>9</i> = ?		
		18 ÷ ? = 9	<i>63</i> ÷ <i>9</i> = ?		
		27 ÷ ? = 9	$72 \div 9 = ?$		
		$36 \div ? = 9$	90 ÷ 9 = ?		
		$45 \div ? = 9$	$99 \div 9 = ?$	and	$99 \div ? = 9$

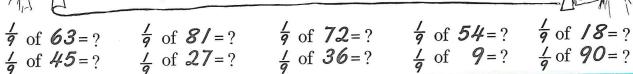
Tell the number that belongs in each block:

×	8	5	7	9	6	4	0
9							

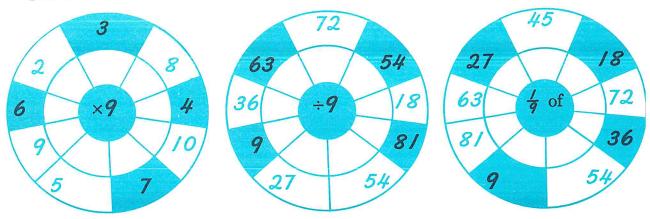
9			241			-4	, - TS
into	81	63	45	72	54	36	27



TO FIND $\frac{1}{9}$ OF A NUMBER, DIVIDE THE NUMBER BY 9.



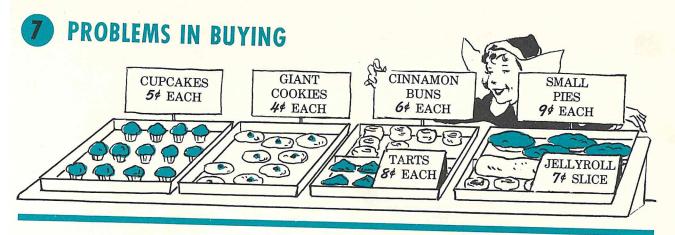
A game to play



How quickly can you say the answers?

Copy and multiply:

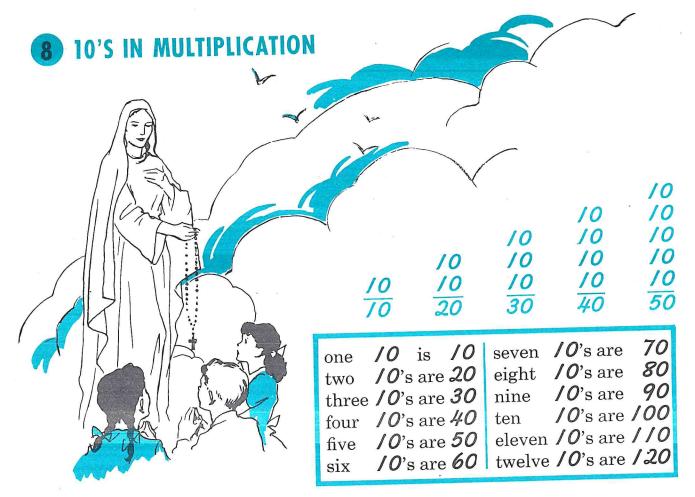
852	420	917	763	376	5/8	509	604	601
×9	×9	×9		<u>×9</u>	×9			



Here are some problems for you to solve. Remember the steps:

- /. Mother bought $\frac{1}{2}$ dozen cup cakes. How much did she pay for them?
- 2. How many giant cookies can Robert buy with 36 cents?
- 3. Mother bought 9 cinnamon buns for the children's lunch. How much did she pay for them?
- 4. Francis has 56 cents. How many slices of jelly roll can he buy?
- 5. Jane's mother gave her 64 cents to buy apple tarts. How many tarts did Jane buy?
- 6. Mother wants to buy a whole pie for each of 7 children. How much will they cost?
- 7. How much will a dozen cup cakes cost for Alice's party?

Add	and say	the ans	swers:		Subtr	act and	say the	e answe	rg.
68	16	26	36	46	15	25 8	35 8	45 8	55 8
68	66	76	86 8	96	65 8	75	85 8	95 8	75 18



Tell the answers:

		there			
In	20	there	are	?	/ 0's
In	40	there	are	?	/0 's

In 60 there are ? /0's In 50 there are ? /0's In 30 there are ? /0's

Say these pairs of multiplication facts:

$$/ \times / 0 = ?$$
 and $/ 0 \times / = ?$
 $5 \times / 0 = ?$ and $/ 0 \times 5 = ?$
 $3 \times / 0 = ?$ and $/ 0 \times 3 = ?$
 $2 \times / 0 = ?$ and $/ 0 \times 2 = ?$
 $6 \times / 0 = ?$ and $/ 0 \times 6 = ?$
 $4 \times / 0 = ?$ and $/ 0 \times 4 = ?$

Tell about the rosary.

If you say one decade of the Rosary, you say /O Hail Marys:

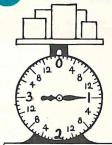
If you say 2 decades? 2×10 or? If you say 4 decades? 4×10 or? If you say 5 decades? 5×10 or? If you say 6 decades? 6×10 or? How many Hail Marys does he say?

Mary says 5 decades of the Rosary. How many Hail Marys does she say?

UNIT TEN:

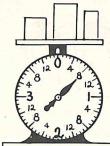
WORKING WITH MEASURES AND TIME

1 OUNCES AND POUNDS



/6 ounces=
/ pound

oz. means ounce or ounces



lb. means pound or pounds



On the scales which you see, the numbers 0-1-2-3 stand for pounds.

The 16 little lines between 0 and 1 show that there are 16 ounces in a pound.

So 4 means 4 ounces: 8 means ? ounces; 12 means ? ounces.

When we reach 16 ounces, we call it a pound.

On the first scale, the arrow points to /. This shows that the meat on the scale weighs /6 ounces or / pound.

The meat on the second scale weighs \mathcal{S} ounces or $\frac{1}{2}$ pound.

The meat on the third scale weighs? ounces.

Say the answers:

pound means $\frac{1}{4}$ of $\frac{1}{6}$ ounces or ? ounces. $\frac{1}{8}$ pound means $\frac{1}{8}$ of ? ounces or ? ounces. $\frac{1}{2}$ pound means $\frac{1}{2}$ of ? ounces or ? ounces. How much less than a pound is $\frac{1}{2}$ ounces? How much more than a pound is $\frac{1}{2}$ ounces? How much less than a pound is $\frac{1}{2}$ ounces?

How much more than a pound is 21 ounces?

Here are some more Roman numbers to learn:

XXVI = 26XXXI = 3/XLI =4/ XLVI =46 XXXVI = 36XXVII = 27XXXII = 32XXXVII = 37 XLII = 42 XLVII = 47XXVIII=28 XXXIII=*33* XXXVIII=38 XLIII=43 XLVIII=48 XXXIX = 39XXIX = 29XXXIV = 34XLIV=44 XLIX = 49XXX = 30XXXV = 35XL=40 XLV = 45 L = 50



To change quarts to pints, multiply by 2. To change pints to quarts, divide by 2.

Say the answers:

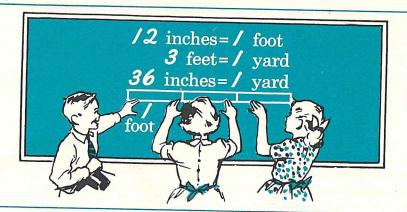
/. How many pints are there in 4 quarts?	8 because $4 \times 2 = 8$.
2. How many pints are there in 8 quarts?	? because $8 \times ?= ?$
3. How many pints are there in 6 quarts?	? because $6 \times ?= ?$
#. How many pints are there in 9 quarts?	? because $9 \times ?= ?$
5. How many quarts are there in 8 pints?	4 because $8 \div 2 = 4$.
6. How many quarts are there in 12 pints?	? because /2 ÷?=?
7. How many quarts are there in 18 pints?	? because /8 ÷?=?
8. How many quarts are there in 16 pints?	? because $16 \div ?= ?$

To change gallons to quarts, multiply by 4. To change quarts to gallons, divide by 4.

Say the answers:

1.	How	many	quarts	are	there	in	3	gallons?	12	because	3×4=12
2.	How	many	quarts	are	there	in	7	gallons?	?	because	7× ?= ?
3.	How	many	quarts	are	there	in	4	gallonș?	?	because	4 × ?= ?
4.	How	many	quarts	are	there	in	6	gallons?	?	because	6 × ?= ?
<i>5</i> .	How	many	gallons	are	there	in	2	O quarts:	? 5	because	20÷4=5
6.	How	many	gallons	are	there	in	3	6 quarts	? ?	because	<i>36</i> ÷ ?= ?
7.	How	many	gallons	are	there	in	2	4 quarts	? ?	because	24 ÷ ?= ?
8.	How	many	gallons	are	there	in	3	2 quarts	? ?	because	<i>32</i> ÷ ?= ?

INCHES • FEET • YARDS



- / foot = ? inches
- 3 feet = ? inches
- 3 feet = ? yard
- 6 feet = ? yards
- 9 feet = ? yards

To change feet to inches, multiply by /2.
To change inches to feet, divide by /2.

Say the answers. Remember the rules:

- /. How many inches are there in 4 feet? 48 because $4 \times 12 = 48$
- 2. How many inches are there in 6 feet? ? because 6×?=?
- 3. How many inches are there in 7 feet? ? because 7× =?
- 4. How many inches are there in 9 feet? ? because $9 \times ? = ?$

- 5. How many feet are there in 24 inches?2 because 24÷/2=2
- 6. How may feet are there in 48 inches? ? because 48÷?=?
- 7. How many feet are there in 60 inches? ? because 60÷?=?
- 8. How many feet are there in 84 inches? ? because 84÷?=?

To change yards to feet, multiply by 3. To change feet to yards, divide by 3.

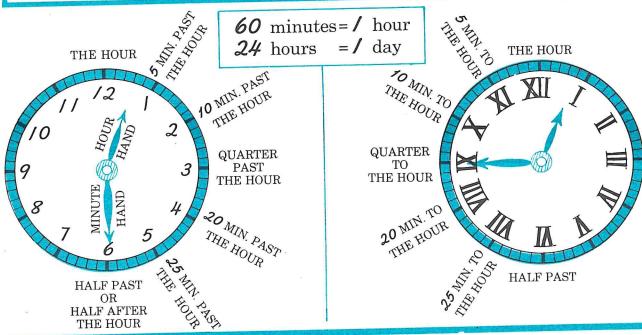
Remember the rules. Say the answers:

- /. How many feet are there in 4 yards? /2 because $4 \times 3 = /2$
- 2. How many feet are there in 6 yards? ? because 6×?=?
- 3. How many feet are there in 9 yards? ? because $9 \times ?=?$
- 4. How many feet are there in /2 yards? ? because /2×?=?

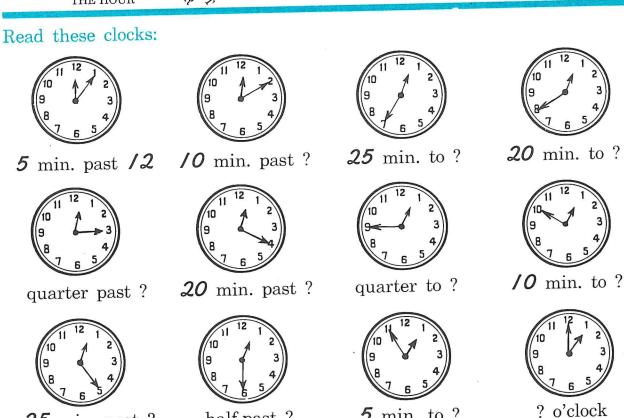
- 5. How many yards are there in 6 feet? 2 because $6 \div 3 = 2$
- 6. How many yards are there in /2 feet? ? because /2÷?=?
- 7. How many yards are there in 2/ feet? ? because 2/÷?=?
- 8. How many yards are there in 27 feet? ? because 27÷?=?

TELLING TIME

It takes the hour hand / hour to go from one number to the next. It takes the minute hand 5 minutes to go from one number to the next.



25 min. past ?



half-past?

5 min. to ?

UNIT ELEVEN:

NEW STEPS IN DIVISION

TWO-PLACE QUOTIENTS

Mother made 80 pieces of fudge. She put them into 4 boxes. In each box she put the same number. How many pieces were in each box? To find the answer, we must divide 80 by 4.

Learn these names:

Think: How many 4's in 8? The answer is 2. Write the 2 directly above the 8.

20 quotient divisor 4/80 dividend

Think: How many 4's in 0? The answer is 0. Write the zero directly above the **0**.

(Remember—zero divided by any number is zero.)

Check: 20 In each box there were 20 pieces.

To check division, multiply the quotient by the divisor.

The answer will be the same as the dividend.

Divide and check:

1.3 90 3 60 2 80 2 40 2 60 3 30 4 40 3 63

2. 2 26 2 42 2 48 2 68 2 82 2 64 2 88 2 66

3. 3 96 3 39 3 69 3 93 3 66 3 36 3 99 4 88

Think: How many 4's

Copy and divide: in /2?

divisor 4/28 dividend Write 3 above 2.

divisor 4/28 dividend Think: How many 4's

1.3 243 2 124

in 8?

2. 3 276 3 2/3 Write 2 above 8.

3. 4 164 4 124 3 273 4 248 3 156 5 155 6 426

4. 7 147 7 357 5 205 6 186 6 366 8 328 9 639

When we divide, our answer is called the quotient.

When we multiply, our answer is called the product.

ZERO IN THE QUOTIENT

Tom's father traveled 480 miles by plane in 2 hours. How far did he go in / hour?

Think: How many 2's in 4? Write 2 above 4.

Think: How many 2's in 8? Write 4 above 8.

Think: How many 2's in 0? Write **0** above **0**.

Tom's father rode 240 miles in / hour.



Remember:

Zero divided by any number is zero.

 $0 \div 2 = 0$

Copy and divide. Remember the rule. Check your answers:

1 2 460

2 260 2 820

2 640 3 630

3 960

3 390

2 4 840 5 550 4 480 3 690 6 660

3 360

7 770

3. 3 120

4 360 7 140 8 240 6 360

8 320

9/180

MIDDLE ZERO IN THE QUOTIENT

Three boys in one room are collecting stamps for the missions. They each have the same number collected. If altogether they have 609 stamps, how many has each?

203 3 609

> Check: 203 $\times 3$ 609

Think: How many 3's in 6?

Write 2 above 6.

Think: How many 3's in 0?

Write $\mathbf{0}$ above $\mathbf{0}$.

Think: How many 3's in 9?

Write 3 above 9.

Copy and divide. Check your answers:

2 608

2 408 2 602

2 804

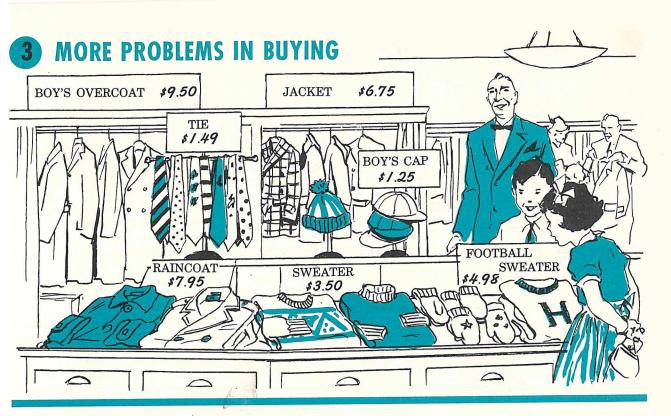
2 204 2 402 2 806

3 903

3 603 3 309 3 306

4 804 4 408

4 404



Work these problems. Remember the steps:



/. Uncle John bought me a sweater and a tie. How much did he pay for them?



2. Aunt Mary bought a new tie for Tom. If she gave the storekeeper \$5.00, how much change did she receive?



3. How much more will Dad have to pay for a sweater than for a boy's cap?



4. Joan has \$6.50. She wants to buy a raincoat for her brother. How much more does she need?



5. Dick needs a cap, Don needs a tie, and Carl needs a sweater. How much will Mother have to pay for all?



6. How much less will a jacket cost than a boy's overcoat?



7. Mother bought Peter a jacket for his birthday. Dad bought him a football sweater. How much did they both cost?



3. Jane wants to buy Tom a tie for his birthday. She has \$2.00 to spend. How much change will she receive?



Do you like music? Visit Buster Bear's Shop. Work these problems. Remember the steps:

- /. My music teacher bought a drum, a horn, and a fiddle. How much did she pay for them?
- 2. Henry has \$5.00. How much change will he receive if he buys a drum at Buster Bear's shop?
- 3. Mrs. Hill wants to buy 2 horns. How much money must she pay Buster Bear?
- 4. Jerry wants to buy a fiddle and a horn. How much will both of them cost?

- 5. How much more than a drum will a fiddle cost?
- 6. Buster Bear bought 4 drums for his band. How much did he pay for them?
- 7. Jane has saved \$7.00. How much will she have left if she buys a drum for her brother's birthday?
- 8. Mr. Kane bought a drum for the school band. Mr. King bought a fiddle. How much money did they spend?

Practice to make progress. Copy and multiply:

		na manapiy.	cos. Copy a	to make progr	1 100000
\$1.90	\$1.17	\$2.24	\$6.04	\$4.08	\$3.05
×8	×9	×9	×8	×7	×6
\$2.22	\$8.09	\$6.30	\$2.87	\$7.27	\$5.05
×7	$\times 2$	× 6	× 5	×3	×4

UNIT TWELVE:

DIVISION WITH REMAINDERS

TABLE OF 2'S

How many 2's in 2?

because one 2 is 2.

2's in 3?

and l over because one l is l and l is l more than l.

2's in 5?



and f over because two f are f and f is f more than f.

When we divide by 2, our helping numbers are:

2-4-6-8-10-12-14-16-18, because these numbers can be divided by 2 without a remainder. Call the helping numbers magic numbers. When we divide the numbers that come between these, we have a remainder. The remainder is always /.

Use counters on your desks and say the answers:

and ? over

 $2\overline{\smash{\big)}\,2}$ and $2\overline{\smash{\big)}\,3}$ and $2\overline{\smash{\big)}\,3}$ over We think of 2 and use it to help us.

2/4 2/5 We think of 4 and use it to help us.

26 We think of 6 and use it to help us.

How many 2's?

2)// and ? over 2)/4 2)/5 and ? over

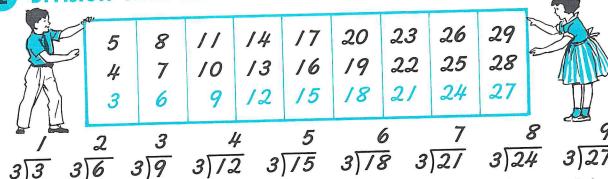
2/2 2/3 and ? over 2/6 2/7 and ? over

? and ? over

Climb the steps. How many 2's?

115

2 DIVISION WITH REMAINDERS • TABLE OF 3'S



When we divide by 3, our magic numbers are 3-6-9-12-15-18-21-24 and 27, because these numbers can be divided by 3 without a remainder. Find these numbers on the chart and subtract each from the other numbers in the same column. When we divide these in-between numbers by 3, we have a remainder. The remainder will be either 1 or 2.

Use counters on your desks to show and say the answer.

2 and 1 over 3 7 1 We think of 6 and use it to help us. 2 and 2 over 3 8 1 We think of 6 and use it to help us. 3 and 1 over 3 10 10 We think of 9 and use it to help us.

3)7 Say: 3 into 7 Magic number, 6 3 into 6, 2 3 into 7, 2 and / over

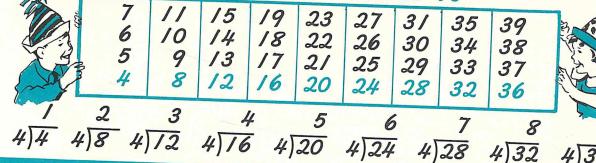
Tell what **magic** number you will use to find how many 3's there are in each of the following numbers:

Do this in your copybooks:

$$\frac{? \text{ and ? over}}{3)/7} \begin{vmatrix} \frac{? \text{ and ? over}}{3)/9} \end{vmatrix} = \frac{? \text{ and ? over}}{3)20} \begin{vmatrix} \frac{? \text{ and ? over}}{3)22} \end{vmatrix} = \frac{? \text{ and ? over}}{3)22}$$

$$\frac{? \text{ and ? over}}{3)25} \begin{vmatrix} \frac{? \text{ and ? over}}{3)26} \end{vmatrix} = \frac{? \text{ and ? over}}{3)28} \Rightarrow \frac{? \text{ and ? over}}{3)29} \Rightarrow \frac{? \text{ and ? over}}{3} \Rightarrow \frac{? \text{ and ? ove$$

DIVISION WITH REMAINDERS • TABLE OF 4'S



When we divide by 4, our magic numbers are 4-8-/2-16-20-24-28-32-36, because these numbers can be divided by 4 without a remainder. Find these numbers and subtract each from the other numbers in the same column. When we divide these in-between numbers by 4, we have a remainder. The remainder will be 1, 2, or 3.

Use counters on your desks to show:

/ and / over / and 2 over / and 3 over 2 and / over 4/5 0000 4/7 00000 4/9 000000

Tell what magic number you will use if you are finding how many 4's there are in each of the following numbers:

 5
 9
 13
 17
 21
 25
 29
 33
 37

 6
 10
 14
 18
 22
 26
 30
 34
 38

 7
 11
 15
 19
 23
 27
 31
 35
 39

4 10 4 into 10

Magic number, 8

4 into 8, 2

4 into 10, 2 and 2 over

? and ? over ? and ? over 4)// 2 and ? over ? and ? over ? and ? over 4)/8

)o this work in your copybooks:

0÷**4**=? and ? over

 $7 \div 4 = ?$ and ? over $1/ \div 4 = ?$ and ? over $9 \div 4 = ?$ and ? over $5 \div 4 = ?$ and ? over $6 \div 4 = ?$ and ? over

6÷4=? and ? over
/4÷4=? and ? over

19÷4=? and ? over 22÷4=? and ? over 25÷4=? and ? over 21÷4=? and ? over

4 MORE 4'S IN DIVISION

Do this work in your copybook:



? and ? over 4)2/
? and ? over
? and ? over 4)38

? and ? over 4)23
? and ? over
? and ? over
? and ? over
$\frac{?}{\sqrt{3/4}}$ and ? over
? and ? over
? and ? over 4)39

Copy and fill in the blanks:

$$29 \div 4 = ?$$
 and ? over

$$26 \div 4 = ?$$
 and ? over

$$35 \div 4 = ?$$
 and ? over

$$33 \div 4 = ?$$
 and ? over

Paul's day. Say the answers:





Paul is getting up. ? o'clock.





Going to school. ? minutes to ?





Back to school. ? past ?





Breakfast time. Half-past?





Home for lunch. ? to ?





School is over. ? minutes to ?

DIVISION WITH REMAINDERS • TABLE OF 5'S



9	14	19	24	29	34	39	44	49
8	13	18	23	28	33	38	43	48
7	12	17	22	27	32	37	42	47
6	11	16	21	26	3/	36	41	46
5	10	15	20	25	30	35	40	45

	5	10	15	20	25	30	35	40	45	C	13
5)5 5											

When we divide by 5, our magic numbers are 5-10-15-20-25-30-35-40-45, because they can be divided by 5 without a remainder. Find these numbers on the chart, and subtract each from the other numbers in the same column. When we divide the in-between numbers by 5, we have a remainder. The remainder will be 1, 2, 3, or 4.

If you are dividing each of the following numbers by 5, tell what magic number you will use:

Use counters on your desks to show:

5 7

5 into 7

Magic number, 5

5 into 5, /

5 into 7, /

and 2 over

? and? over

? and ? over

? and? over

? and? over

? and? over

5 28

? and? over.

? and? over.

? and ? over.

? and? over.

? and? over.

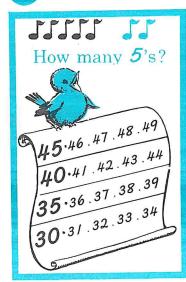
Say the answers:

 $17 \div 5 = ?$ and ? over

16÷**5**=? and ? over

 $29 \div 5 = ?$ and ? over.

6 MORE 5'S IN DIVISION



Do you know the answers?

? and ? over $5\overline{3/}$
? and ? over 5 34
? and ? over 5) 38
? and ? over
5)42 ? and ? over
5)46

? and ? over
$$5) 32$$
? and ? over $5) 36$
? and ? over $5) 37$
5) 39
? and ? over $5) 47$
? and ? over $5) 47$
5) 47
5) 47

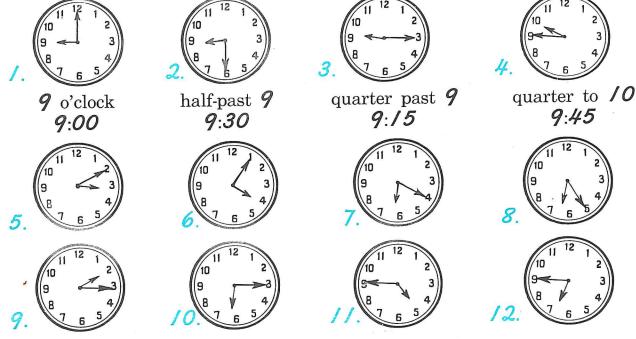
Say the answers:

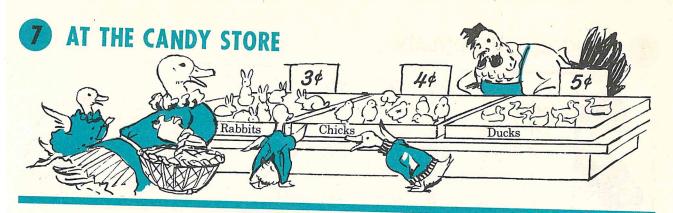
$$37 \div 5 = ?$$
 and ? over $43 \div 5 = ?$ and ? over $48 \div 5 = ?$ and ? over $32 \div 5 = ?$ and ? over $44 \div 5 = ?$ and ? over

$$38 \div 5 = ?$$
 and ? over $39 \div 5 = ?$ and ? over $33 \div 5 = ?$ and ? over $46 \div 5 = ?$ and ? over $4/ \div 5 = ?$ and ? over

$$36 \div 5 = ?$$
 and ? over $42 \div 5 = ?$ and ? over $49 \div 5 = ?$ and ? over $47 \div 5 = ?$ and ? over $34 \div 5 = ?$ and ? over

Write the time in 2 ways in your copybook:





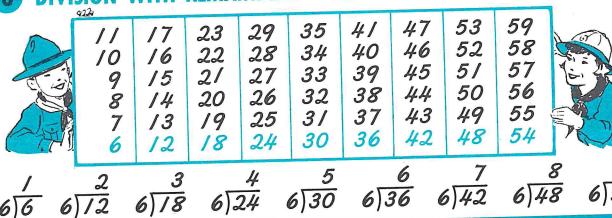
Work these problems. The magic numbers will help you:

- /. How many candy rabbits can Mrs. Quack buy for 7 cents? How much money will she have left?
- 2. Mrs. Quack has 17¢. How many candy ducks can she buy for little Quack and how many cents will she have left?
- 3. Ray has 18 cents. How many little chicks can he buy and how many cents will he have left?
- 4. How many little rabbits can Mother buy for 23 cents? How many cents will she have over?
- 5. Mary has 27 cents. How many candy chicks can she buy and how many cents will she have over?
- 6. Mother divided 28 candy ducks among her 5 little girls. How many did each receive and how many ducks were left over?
- 7. Rose divides /4 candy rabbits among her 4 brothers. How many will each receive? How many will she have over?
- 8. Mrs. Hen bought /3 candy eggs. She put them in 5's. How many 5's did she have? How many eggs were over?

Practice to make progress. Say the answers:

? and ? over ? and ? over ? and ? over
$$3\sqrt{23}$$
 ? and ? over $2\sqrt{1/2}$? and ? over $3\sqrt{1/2}$? and ? over $3\sqrt{1/2}$? and ? over $1/2 \div 5 = 2$ and ? over

REMAINDERS • TABLE OF 6'S



When we divide by **6**, our **magic** numbers are **6-/2-/8-24-30-36-42-**48-54, because we can divide these numbers by 6 without having a remainder. Find these numbers on the chart and subtract each from the other numbers in the same column. When we divide these in between numbers by 6, we have a remainder. The remainder will be 1, 2, 3, 4 or 5.

If you are dividing each of the following numbers by 6, what magic number will you use?

6 into 35 Magic number, 30. 6 into 30, 5. 6 into 35, 5 and 5 over.

Use counters at your desks to show:

9

MORE 6'S IN DIVISION

How many 6's?

Say the answers:

$$38 \div 6 = ?$$
 and ? over $40 \div 6 = ?$ and ? over

$$37 \div 6 = ?$$
 and ? over

$$4/\div 6=?$$
 and ? over

$$39 \div 6 = ?$$
 and ? over

$$43 \div 6 = ?$$
 and ? over

$$46 \div 6 = ?$$
 and ? over

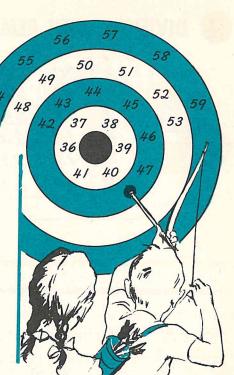
now many os.

$$47 \div 6 = ?$$
 and ? over

$$5/\div 6=?$$
 and ? over

$$53 \div 6 = ?$$
 and ? over

$$58 \div 6 = ?$$
 and ? over



Tell the number that belongs in each block:

6 into	41	46	40	55	50	57	52	49	38	37	43	39	44	51	57	45	56
Quotient						7					i e						
Remainder				TT				-56.		ș.	4.				وغدي		

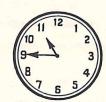
Write the time in two ways in your copybook:



quarter after 2



quarter after?



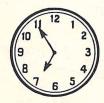
quarter to?



quarter to?



? minutes to ?



? minutes to ?

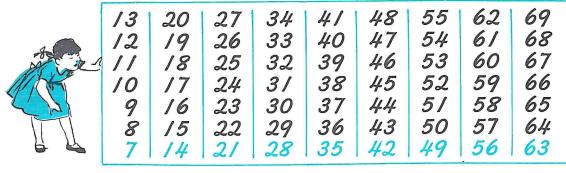


? minutes to ?



? minutes to ?

10 DIVISION WITH REMAINDERS • TABLE OF 7'S



$$\frac{1}{7|7}$$
 $\frac{2}{7|14}$ $\frac{3}{7|21}$ $\frac{4}{7|28}$ $\frac{5}{7|35}$ $\frac{6}{7|42}$ $\frac{7}{7|49}$ $\frac{8}{7|56}$ $\frac{9}{7|63}$

When we divide by 7, our magic numbers are 7-14-21-28-35-42-49-56-63. Find these numbers on the chart and subtract each from the other numbers in the same column. When we divide the in-between numbers by 7, we have a remainder. The remainder will be 1, 2, 3, 4, 5, or 6.

Tell what the remainder is when you subtract the following:

7 from //?	/4 from 20 ?	28 from 34 ?	35 from 40 ?	56 from 60 ?
7 from /3?	/4 from /9?	<i>35</i> from <i>37</i> ?	49 from 54 ?	63 from 65 ?
7 from /0?	21 from 26 ?	42 from 47 ?	35 from 4 /?	49 from 50 ?

To divide each of the following numbers by 7, what magic number will you use?

Say the answers:

? and ? over ? and ? over ? and ? over
$$7/3$$
 ? and ? over $7/3$? and ? over ? and ? over $7/3$? and ? over ? and ? over ? and ? over $7/3$? and ? over $7/3$? $3/3$? $3/3$? $3/3$? $3/3$? $3/3$? $3/3$? $3/3$? $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? over $3/3$? $3/3$? over $3/3$? over

MORE 7'S IN DIVISION



How many 7's? How many over?



Say the answers:

$$4/\div 7=?$$
 and ? over

$$34 \div 7 = ?$$
 and ? over

$$30 \div 7 = ?$$
 and ? over

$$12 \div 7 = ?$$
 and ? over

$/3 \div 7 = ?$ and ? over

$$3/\div 7=?$$
 and ? over

$$27 \div 7 = ?$$
 and ? over

$$/9 \div 7 = ?$$
 and ? over

$$25 \div 7 = ?$$
 and ? over

$$1/\div 7=?$$
 and ? over

$$39 \div 7 = ?$$
 and ? over

$$10 \div 7 = ?$$
 and ? over

$$24 \div 7 = ?$$
 and ? over

$$33 \div 7 = ?$$
 and ? over

? and ? over 7)43

? and? over

? and? over

Remember the magic numbers: Copy and divide.

?	and	?	over
-			

? and ? over

? and ? over 7) 53

? and ? over 7) 57

? and ? over 7/59

? and ? over

? and ? over 7)54

? and? over 7 67

? and? over

? and? over

? and ? over

? and? over

Tell the number that belongs in each block:

7 into	43	62	50	69	55	67	51	60	54	46	68	59	66	61	52	47	53
Quotient					1				2 1								
lemainder																1	11

12 DIVISION WITH REMAINDERS • TABLE OF 8'S

	/5 /4 /3 /2 // /0 9	23 22 21 20 19 18 17	31 30 29 28 27 26 25 24	39 38 37 36 35 34 33 32	47 46 45 44 43 42 41 40	55 54 53 52 51 50 48	63 62 61 60 59 58 57 56	71 70 69 68 67 66 65 64	79 78 77 76 75 74 73 72	
/ 8\8 8\	2 16	3 8\24	8)3	<u>4</u> 32	5 8\40	8\4	6	7 3\56	8 6	8 4 8

In the table of 8's the magic numbers are 8-16-24-32-40-48-56-64-72. Can you tell why? Find these numbers on the chart, and subtract each from the other numbers in the same column. When dividing the inbetween numbers by 8, the remainder will be 1, 2, 3, 4, 5, 6, or 7.

Tell what the remainder is when you subtract the following:

8 from //?	16 from 23 ?	24 from 30 ?	<i>48</i> from <i>53</i> ?	56 from 63 ?
8 from 13?	16 from 21 ?	24 from 29 ?	48 from 50 ?	56 from 6 /?
8 from 12?	16 from 22?	32 from 39 ?	48 from 52 ?	64 from 70 ?

Divide each of the following numbers by 8. What magic number will you use?

13	21	29	45	54	63	60	78	<i>52</i>
23 17	2/ 25 3/ 33	<i>30</i> <i>39</i>	49 55	50 66	77 73	59 74	22 35	69
15	33	42	20	70	79	76	51	62

Tell the number that belongs in each block:

8 into	9	13	10	14	12	//	15	17	20	19	21	23	20	22	33	25	27	37
Quotient																		_
Remainder																		

MORE 8'S IN DIVISION

A game to play



Say the answers:

$$28 \div 8 = ?$$
 and ? over $30 \div 8 = ?$ and ? over $29 \div 8 = ?$ and ? over $3/ \div 8 = ?$ and ? over $35 \div 8 = ?$ and ? over $36 \div 8 = ?$ and ? over $36 \div 8 = ?$ and ? over $36 \div 8 = ?$ and ? over $37 \div 8 = ?$ and ? over $37 \div 8 = ?$ and ? over

$$39 \div 8 = ?$$
 and ? over $27 \div 8 = ?$ and ? over $4/ \div 8 = ?$ and ? over $43 \div 8 = ?$ and ? over $44 \div 8 = ?$ and ? over $45 \div 8 = ?$ and ? over $47 \div 8 = ?$ and ? over $46 \div 8 = ?$ and ? over $49 \div 8 = ?$ and ? over

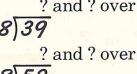
Remember the magic numbers: Copy and divide.

? a:	nd?over
8 15	
? ai	nd?over
831	
	nd?over
8 49	
	1.0

7				
?	and	?	over	
3.				
?	and	?	over	

	? a:	nd?	over
8 7	4	- gra si	hals.

	?	and	?	ov	er
8	18				
	0	1	0		



? and? over

$$8)55$$
? and ? over

-					
	?	and	?	over	
0	70				

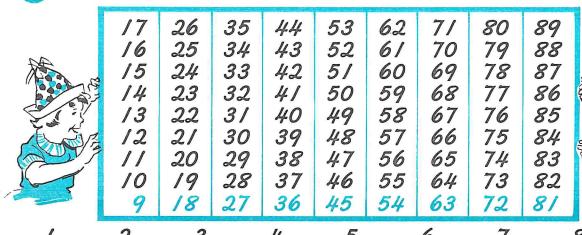
	?	and	?	over
8	79			

Tell the number that belongs in each block:

8 into	50	53	51	54	57	58	59	61	66	65	62	68	73	75	78	77
Quotient		-														
Remainder																

Copy and multiply:

14 DIVISION WITH REMAINDERS • TABLE OF 9'S



9)36

When dividing by **9**, our **magic** numbers are **9-18-27-36-45-54-63- 72-81**. Why?

Find these numbers on the chart and subtract each from the other numbers in the same column. When dividing the in-between numbers by 9, the remainder will be 1, 2, 3, 4, 5, 6, 7, or 8.

Divide each of the following by **9**. What **magic** number will you use?

When dividing numbers from:

9 to 17 by 9, the quotient will be 1
18 to 26 by 9, the quotient will be ?
27 to 35 by 9, the quotient will be ?
45 to 53 by 9, the quotient will be ?
63 to 44 by 9, the quotient will be ?
72 to 80 by 9, the quotient will be ?
63 to 71 by 9, the quotient will be ?

Copy and divide. Remember the magic numbers:

| ? and ? over |
|--------------|--------------|--------------|--------------|
| 9/10 | 9/14 | 9/20 | 9)24 |
| ? and ? over |
| 9)26 | 9)30 | 9 32 | 9 35 |
| ? and ? over |
| 9)37 | 9)40 | 9)50 | 9 44 |
| ? and ? over |
| 9 49 | 9 52 | 9/6/ | 953 |

UNIT THIRTEEN:

INTRODUCING LONG DIVISION

STEPS IN LONG DIVISION

Chocolate eggs are 2 cents each. If Tom has 7 cents, how many eggs can he buy? How much will Tom have left?

This is a problem in division: 27

We are going to learn a new way of dividing 7 by 2.

Step /--Divide: To find how many 2's in 7, I must know how many 2's in 6.

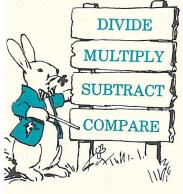
$$6 \div 2 = 3$$
Put 3 in the quotient

 $3\times2=6$ Put 6 under 7. Draw line under 6.

Step 2—Multiply: Step 3—Subtract: | 6 from 7 leaves /. Put / under 6. / is the remainder.

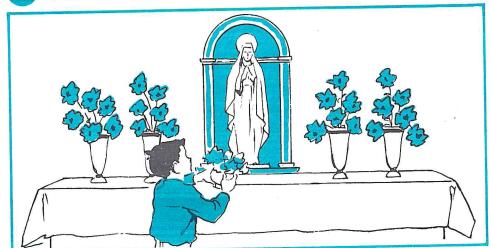
Step 4—Compare: The remainder must be less than the divisor. / is less than 2.

Tom can buy 3 eggs and have / cent left.



Copy and divide the long way:

2 PROBLEMS



 $\frac{4}{6)26}$ and $\frac{2}{2}$ over $\frac{24}{2}$

Ray has **26** roses for Our Lady's Altar. He puts them into vases, **6** in each vase. Then he sees he has **2** roses over, so Sister finds a little vase for them. Ray is very happy as he puts the flowers at Our Lady's feet.

Do these problems in your copybook.

/. Mary has 30 daisies. She wants to make bouquets for Our Lady. If she puts 8 in each bouquet, how many bouquets can she make? How many daisies will she have over?

$$\frac{3}{8)30}$$
 and 6 over $\frac{24}{6}$

- 2. Betty has 28 cookies. She puts them on plates for the party. On each plate she puts 6 cookies, and finds she has some cookies over. How many 6's has she? How many cookies are over?
- 3. Marie went to the store to buy

- cup cakes at **6** cents each. How many did she buy with **45** cents? How many cents did she have left?
- 4. How many 7-cent toys can Billy buy with 30 cents? How many cents will he have left?
- 5. Sam has 23 cents. How many 8 cent copybooks can he buy? How many cents will he have left?
- 6. Rose has 28 bars of candy. She divides them among 5 girls. How many bars of candy does each girl receive? How many are over?
- 7. There were **26** Cub Scouts in a parade. If there were **4** in each row, how many rows were there? How many Cubs were over?

MORE LONG DIVISION

Write in your copybook. Follow step by step.

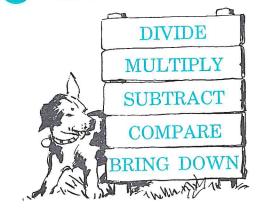
How many 3's are there in 85 and how many are over?

- /. Divide: 8÷3. Put 2 in the quotient above the 8. (How many 3's in 6?)
- 2. Multiply: $2 \times 3 = 6$. Put 6 under the 8. Draw line.
- 3. Subtract: 6 from 8 leaves 2. Put 2 under the 6.
- 4. Compare: Is the remainder less than the divisor? Yes, 2 is less than 3.
- 5. Bring down: Bring down the 5 and write it beside the 2.
- /. Divide: 25÷3=8 (How many 3's in 24?) Put 8 in the quotient above the 5.
- 2. Multiply: $8 \times 3 = 24$ Write 24 under the 25. Draw line.
- 3. Subtract: 4 from 5 leaves 1. Put / under 4. 2 from 2 leaves nothing. Zero is not written here.
- 6. Compare: Is the remainder less than the divisor? Yes, / is less than 3. $85 \div 3 = 28$ and / over.

	2
3	85
П	2

- 6 25 24

4 PRACTICE IN LONG DIVISION



Copy and divide these the long way:

Do you know all the answers? Say the answers quickly.

Add:

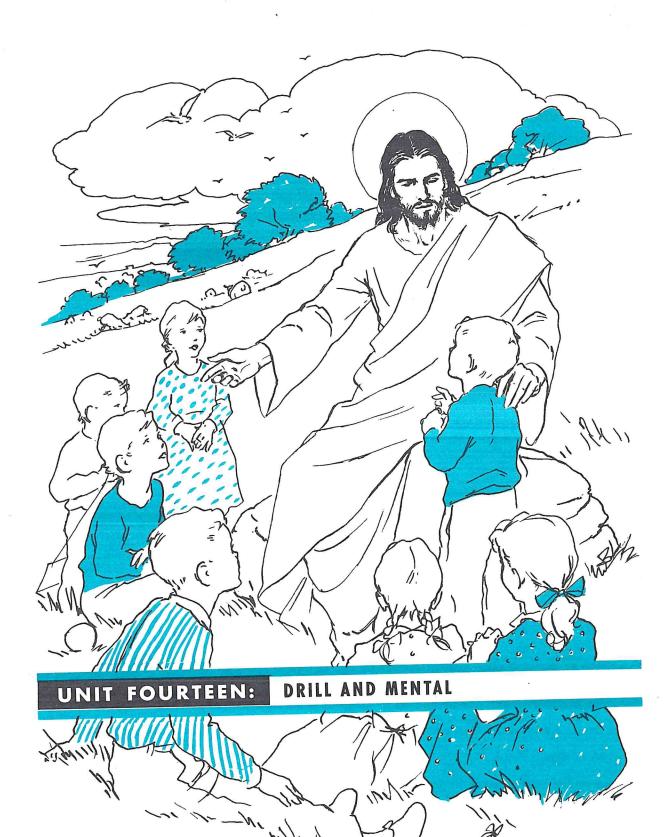


Subtract and tell the answers:

13	4	14	17	12	2	13	7		16
12 5	/5 7	8	12	11	13	12	13	16	14
15	14 7	8	6	/2	13	8	5	14	12
14	15	15	16	7	17	18	<i>5 0</i>	3	9

Multiply and tell the answers:

0 2	9	5 2	7 2	<i>3 2</i>	8 2	<i>4 2</i>	2	6 2	2 2	2 3
53	7 3	9	7 2 1 3 1 4 1	<i>4 3</i> –	6		3	<i>5 4</i>	2 4	6 4
53-74-85-46-77-21	92-73-04-25-96-27-79-	9	<i>#</i>		63 - 84 - 55 -	83-34-16-57-	12-33-65-56-17-68	62-54-15-86-47-28-89	22-24-95-26-77-78-49	23-64-45-76-67-98-90-
8 5 -	2 5 -	94-65-36-48-99	35-66-	4 4 7 5 3 7	<i>5 5</i>	6	5	8	26	7
46	96	36	6		8 7 -	<i>5</i>	7	<i>4 7</i>	7 7	6
7	2 7 -	8	/ 8 6 9	5 8 0 9	8	3 8 5 9		2	7	9
}	7 9	9	69	0 9	8 8 2 9	<i>5</i>	9	8	4	9



Drill and Mental

			I	Drill	1			
$\frac{1}{+4}$	$\frac{6}{+4}$	$\frac{3}{+5} + \frac{2}{+5}$	$\frac{2}{7} + \frac{8}{2}$	$\frac{6}{+2}$	$\frac{3}{+2}$	$\frac{4}{+1} + \frac{4}{+1}$	$\frac{4}{5} + \frac{2}{5}$	$\frac{2}{+4}$
$\frac{1}{+4}$	$\frac{11}{+4}$	$\frac{21}{+4}$	$\begin{array}{r} 31 \\ +4 \end{array}$	41 +4	51 +4	61 +4	$\frac{71}{+4}$	81 +4
$\frac{5}{-4}$	$\frac{15}{-4}$	25 -4	$\begin{array}{c} 35 \\ -4 \end{array}$	45 -4	55 <u>-4</u>	$\begin{array}{c} 65 \\ -4 \end{array}$	75 -4	85 -4
1×2		5×2		3×2		2×2	4	1×2
2)2		2)10	2	2)6		2)4	2	2)8

Mental 1

- 1. Mary has 4 blue pencils and 1 red pencil. Mary has ____ pencils.
- 2. John had 1 cent. Mother gave him 4 more. John then had ____ cents.
- 3. Sally has 2 books. Tim has 5 times as many. Tim has __ books.
- 4. How many 2's in 10?
- 5. Nan had 5 pennies. She gave 4 to Ned. Nan had ____ pennies left.

Drill 2 5 3 5 2 3 6 4 1 <u>+2 +5 +1 +4 +3 +5 +5 +2 +3 +5 +4</u> 22 32 42 52 62 72 82 92 +3 +3 +3 +3 +3 +3 +325 35 55 -3-3-3-3 4×2 11×2 8×2 12×2 9×2 3)8 2)222)16 2)242)18

Mental 2

- l. One taffy costs 2 cents. 11 taffies will cost cents.
- How many 2's are there in 22? _____ Lane has 2 blue pencils and 3 red pencils. Jane has ___ pencils.
- . Susan had 5 paper dolls. If she gave 3 to Betty, she had ____ dolls left.
- . There are ____ days in 1 week.

Drill 3

$\frac{3}{-1}$	$\frac{10}{-5}$	$\frac{4}{-3}$	$\frac{9}{-5}$	$\frac{5}{-2}$		11 -6	11 -9	$\frac{7}{-4}$	8 -1
$\frac{2}{+4}$	$\begin{array}{c} 12 \\ +4 \end{array}$	$\frac{22}{+4}$	$\frac{32}{+4}$	$\frac{42}{+4}$	52 +4	62 +4	$\begin{array}{r} 72 \\ +4 \end{array}$	82 +4	92 +4
$\frac{6}{-4}$	16 -4	26 -4	36 -4	$\frac{46}{-4}$	56 -4	66 -4	$\begin{array}{c} 76 \\ -4 \end{array}$	86 -4	96 -4
	=18 =18			×_: ×_:	=14 =14			×_= < =	

Mental 3

- 1. Marie had 6 cents. She spent 4 cents. She had ____ cents left.
- 2. John had 9 fish and Tim had 2 fish. They both had ____ fish.
- 3. XII means _____
- 4. One cake costs 2 cents. 12 cakes will cost ____ cents.
- 5. How many 2's are there in 24?

Drill 4

	Drill 4									
$\frac{4}{+5}$	$\frac{5}{+3}$	$\frac{6}{+4}$	$\frac{7}{+2}$	8 +3	$\frac{5}{+6}$	$\frac{9}{-4}$	$\frac{8}{-5}$	$\frac{10}{-6}$	9 -7	
3 +3	13 +3	$\frac{23}{+3}$	33 +3		53 +3	63 +3	73 +3	83 +3	93 +3	
6 -3	16 -3	$\frac{26}{-3}$	36 -3	46 -3	56 -3	66 -3	76 -3	86 -3	96 -3	
$ 5 \times 2 $ $ 10 \div 2 $ $ \frac{1}{2} \text{ of } 1 $	2	9× 18÷ ½ of	2	7× 14 ÷ ½ of	-2		×2 ÷2 f 24		×2 ÷2 16	

- 1. There were 5 boys and 6 girls in the room. There were ____ children in the room.
- 2. Tom had 11 fish. He gave 5 away. Tom had ____ fish left.
- 3. Jack has 9 pencils. Dick has 2 times as many. Dick has ____ pencils.
- 4. There are ____ things in a dozen.
- 5. $\frac{1}{2}$ of 18 cents = ____.

$$3+9$$
 $9+2$ $5+5$ $7+5$ $9+3$ $4+5$ $7+1$ $8+4$ $4+5$ $7+1$ $5+7$ $8+4$ $7+2$ $6+2$ $4+8$ $6+5$ $9+1$ $5+6$ $7+3$ $4+3$ $6+3$

Add 3 to: 4, 14, 24, 34, 44, 54, 64, 74, 84 Subtract 4 from: 7, 17, 27, 37, 47, 57, 67, 87

9×2	7×2	8×2	2×7	2×9
$18 \div 2$	$14 \div 2$	$16 \div 2$	$14 \div 7$	$18 \div 9$

Mental 5

- 1. Mr. Brown had 12 cows. He sold 5 of them. How many had he left? ____
- 2. Jane has 4 pens and Joan has 3 pens. How many do they both have?
- 3. 14 equals 7×____
- 4. Pencils are 2 cents each. How many can John buy for 14 cents?
- 5. ___ pints = 1 quart.

Drill 6

Add 5 to: 12, 22, 32, 42, 52, 62, 72, 82 Subtract 5 from: 7, 17, 27, 37, 47, 57, 67 Multiply by 2, then by 3: 2, 4, 8, 10, 12 Divide by 3: 6, 12, 18, 21, 24, 30, 36, 27

Mental 6

- 1. Betty has 5 white roses and 2 red roses. How many roses has she? ____
- 2. Tom had 12 cents. He spent 4 cents. How much had he left?
- 3. What will 7 stamps cost at 3 cents each? _
- 4. Mother divided 21 cookies among 3 boys. How many cookies did each boy have?
- 5. ___ nickels = 1 dime.

Drill 7

Add 5 to: 3, 13, 23, 33, 43, 53, 63, 73, 83, Subtract 5 from: 8, 18, 28, 38, 48, 58, 68, 78 10's 7's 5's 4's 8's 9's Three 3's 10's 7's 5's 4's 8's 9's 3's Two

 $3\overline{)9}$ $3\overline{)27}$ $3\overline{)24}$ $3\overline{)30}$ $3\overline{)21}$ $3\overline{)15}$ $3\overline{)12}$

Mental 7

- 1. If there are 2 men on a bus and 5 more men get on, how many men are on the bus?
- 2. There were 12 pumpkins on a vine. Tom picked 9 of them. How many were left?
- 3. One ruler costs 3 cents. How much will 9 of them cost?____
- 4. ___ nickels=1 quarter.
- 5. If there are 27 boys in 3 rows, in 1 row there are ____ boys.

Drill 8

Add 6 to: 2, 12, 22, 32, 42, 52, 62, 72, 82 Subtract 6 from: 8, 18, 28, 38, 48, 58, 68, 78 Multiply by 3, then by 2:

1, 3, 5, 6, 7, 9, 11, 2, 4, 6, 8 Divide by 3: 36, 33, 30, 27, 24, 21, 18

- Frank had 8 books. He read 2 of them. How many had he still to read? ____
- 2. Bob is 11 years old. Dad is 3 times as old. How old is Dad? ____
- 3. Joan divided 30 cents among 3 girls. How much did each girl receive? ____
- **4.** ____ feet = 1 yard.
- 5. Jim saw 7 planes. Tim saw 6 planes. How many did they both see? ____

13	13	13	13	12	11	9	10
-7	-6	-8	-5	-6	-5	-4	-6

Add 2 to: 7, 17, 27, 37, 47, 57, 67, 77, 87 Subtract 2 from: 9, 19, 29, 39, 49, 59, 69 \(\frac{1}{3}\) of: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

7×3	3×7	$21 \div 7$	$21 \div 3$
8×3	3×8	$24 \div 8$	$24 \div 3$
4×3	3×4	$12 \div 4$	$12 \div 3$
6×3	3×6	$18 \div 3$	18÷6

Mental 9

- 1. Jane is 2 years old. Her sister is 7 years older. How old is her sister? ____
- 2. $\frac{1}{3}$ of 24 days = ____ days.
- 3. John has 13 story books. He has read 8 of them. How many has he still to read?
- 4. How much will three 8-cent rulers cost? _
- **5.** 3 dimes = ____ cents.

Drill 10

Add 6 to: 3, 13, 23, 33, 43, 53, 63, 73, 83 Subtract 6 from: 9, 19, 29, 39, 49, 59, 69

$$3 \times$$
 = 9 $7 \times$ = 21 $3 \times$ = 15 $5 \times$ = 15 $9 \times$ = 27 $3 \times$ = 27 $9 \div 3 =$ = $15 \div 3 =$ = $21 \div 3 =$ = $9 \div$ = 3 $15 \div$ = 5 $21 \div$ = 7

Mental 10

- 1. Peggy had 7 red crayons and 6 yellow crayons. How many crayons did she have?
- 2. Jean had 9 cents. She gave 6 to Tom. How many cents had she left?
- 3. In one dozen there are ____ things.
- 4. If Don has 7 marbles and Roy has 3 times as many, how many marbles has Roy?
- 5. Ann has 8 jacks and Sally has 5. How many do they both have? ____

Drill 11

Add 4 to: 5, 15, 35, 25, 45, 75, 55, 65, 85

Subtract 4 from: 9, 19, 39, 29, 49, 79, 59

Multiply by 2, by 3, and by 4: 1, 3, 5, 7, 9, 11, 0, 2, 4, 6

Divide by 4: 4, 12, 20, 28, 36, 44, 24, 32

Mental 11

- 1. Harry saw 4 puppies and Dan saw 5 puppies. How many puppies did they both see? ____
- 2. There are 8 pictures on one page and 6 pictures on another. How many pictures are on the two pages?
- 3. Farmer Smith has 9 pigs. If he sells 5 of them, how many will he have left?
- 4. How much will seven 4-cent pens cost?
- 5. $28 \div 4 =$

Drill 12

$$14-8$$
 $14-9$ $13-7$ $8-4$ $13-8$ $14-6$ $14-5$ $13-6$ $10-5$ $9-5$

Add 5 to: 15, 25, 45, 75, 95, 55, 85, 65

Subtract 5 from: 9, 19, 29, 39, 49, 79, 99

Multiply by 2, by 3, and by 4: 0, 2, 4, 6, 8, 10, 12, 9, 5, 7

Divide by 4: 8, 16, 20, 24, 32, 40, 48, 36

- 1. Grace had 14 gold stars. She gave 8 to Jim. How many stars had she left? ____
- 2. I have 15 cents. If Mother gives me 5 more, how much money will I have?
- 3. If there are 8 boys in each row, how many boys are there in 4 rows?
- 4. Mother divided 32 cookies among 4 boys. How many cookies did each boy have?
- 5. Two dimes = ___ cents.

8 + 6	7 + 6	9 + 3	6 + 4	9 + 5
14 - 8	13 - 7	12 - 9	10 - 6	14 - 9

Add 3 to: 6, 16, 26, 36, 46, 96, 86, 56, 66 Subtract 3 from: 9, 19, 29, 49, 79, 69, 59

$$1\times4$$
 7×4 2×4 8×4 10×4 11×4 3×4 9×4 4×4 5×4 6×4 12×4

Divide by 4: 12, 36, 16, 40, 24, 32, 20

Mental 13

- 1. A 6-cent book and a 4-cent pencil will cost ____ cents.
- 2. Dick had 14 balloons. He gave 9 of them to David. How many had he left? ____
- 3. 1 foot = $_$ inches.
- 4. Jane divided 16 crayons among 4 girls. How many crayons did each receive?
- 5. There are 9 boys on a team. How many boys are on 4 teams? ____

Drill 14

$$8+7$$
 $9+6$ $8+6$ $7+6$ $6+6$ $9+2$ $7+8$ $6+9$ $6+8$ $6+7$ $7+5$ $3+4$

Add 3 to: 5, 15, 25, 45, 35, 75, 55, 95, 85 Subtract 3 from: 8, 18, 38, 58, 28, 68, 98, 78 Divide by 4: 12, 20, 32, 24, 28, 40, 36

Mental 14

- 1. Mother baked 8 cakes on Monday and 7 cakes on Tuesday. How many cakes did she bake? ____
- 2. 3 boys and 5 girls were playing a game. How many children were playing? ____
- 3. ____ dimes = 1 dollar.
- 4. Jack sold 3 of his 8 tickets. How many had he left to sell?
- 5. How much must Fred pay for seven 4-cent tablets? _____

Drill 15

$$15-8$$
 $15-6$ $11-5$ $9-4$ $7-3$ $15-7$ $15-9$ $11-6$ $9-5$ $7-4$

Add 4 to: 3, 13, 43, 73, 23, 53, 83, 63, 93 Subtract 3 from: 7, 17, 77, 37, 57, 87, 67

$$3 \times 4$$
 4×3 7×4 $12 \div 3$ $12 \div 4$ $28 \div 7$ 4×7 9×4 4×9 $28 \div 4$ $36 \div 9$ $36 \div 4$

Divide by 4: 12, 28, 32, 36, 16, 20, 8

Mental 15

- Ray had 15 pennies. He lost 7 of them. How many had he left? ____
- 2. Joe has 4 kittens and Jim has 3. How many kittens do both boys have? ____
- 3. If 12 apples are divided among 4 boys, how many apples will each boy have? ____
- 4. Ruth bought four 6-cent balloons. How much did she pay for them? ____
- 5. 3 feet = ____ yard.

Drill 16

$$9+6$$
 $8+5$ $7+4$ $5+4$ $7+3$ $8+7$ $15-9$ $13-8$ $11-7$ $9-5$ $10-3$ $15-8$

Add 5 to: 4, 14, 34, 84, 64, 94, 74, 24, 44 Subtract 5 from: 9, 19, 39, 89, 69, 99, 79

Multiply by 2, by 3, and by 4: 9, 0, 2, 4, 6, 8, 10, 7, 1, 3, 5

14 of: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40

- 1. On the shelf there are 9 readers and 6 spellers. How many books are there?
- 2. Marie had 4 coloring books. Mother bought her 5 more. How many had she then?
- 3. There are 4 quarts in one gallon. How many quarts are there in 4 gallons?
- 4. The Roman number for 13 is _____.
- 5. Jerry has 15 cents. If he buys a 9-cent pencil box, how much will he have left?

8+8 9+7 6+8 7+5 4+9 6+1 5+9 7+9 8+6 5+7 9+4 1+6

Add 7 to: 2, 12, 22, 42, 52, 72, 32, 62, 82 Subtract 7 from: 9, 19, 29, 49, 59, 79, 39 Nine 3's eight 4's six 2's five 4's

 $3)\overline{27}$ $4)\overline{32}$ $2)\overline{12}$ $4)\overline{20}$ $8)\overline{24}$ $4)\overline{36}$ $\frac{1}{4}$ of 48, 40, 36, 32, 28, 24, 20, 16, 12

Mental 17

- 1. Nellie had 9 candles on her cake and Sally had 7. How many candles were on both cakes?
- 2. Bob has 16 cents. Ted has 9 cents. How many cents less has Ted than Bob? ____
- 3. $\frac{1}{4}$ of 36 cents = ____ cents.
- 4. Nine 3-cent stamps will cost ____ cents.
- 5. How many tens in 75? _7_

Drill 18

16-8 16-9 13-7 11-5 9-4 15-8 15-7 16-7 13-6 11-6 9-5 14-7

Add 5 to: 6, 16, 26, 36, 46, 56, 66, 76, 86 Subtract 5 from: 11, 12, 13, 14, 10, 9, 8, 7 Multiply by 2, by 3, by 4, and by 5:

8, 1, 3, 5, 7, 9, 11, 0, 2, 4, 6 Divide by 5: 5, 15, 25, 35, 45, 55, 20

Mental 18

- John is 6 years old. His brother is 5 years older. How old is his brother?
- Ben saw 16 planes. Sally saw 9. How many more planes did Ben see than Sally?
- . How many 5-cent bars can May buy for 15 cents? ____
- Jill bought ten 5-cent fans. How much did she pay for them?
- . In 2 weeks there are ____ days.

Drill 19

9+7 6+9 8+6 7+6 7+5 4+7 16-9 15-6 14-8 13-6 12-7 11-4

Add 4 to: 7, 17, 27, 37, 47, 57, 67, 77, 87

Subtract 4 from: 11, 12, 13, 14, 10, 9, 8, 7, 6

Multiply by 2, by 3, by 4, and by 5:
9, 2, 4, 6, 8, 10, 12, 0, 3, 5, 7

Divide by 5: 10, 20, 30, 40, 50, 25, 45

Mental 19

- 1. Joan had 7 circus tickets and John had 4 tickets. How many tickets did they both have? ____
- 2. Tom has 9 tickets. If Tim gives him 7 more, how many tickets will he have?____
- 3. May has 11 cents. Ruth has 4. How much less has Ruth than May?
- 4. There are 6 boys in a row. How many boys are in 5 rows?
- 5. There are 5 boys in a row. How many rows will 30 boys need?

Drill 20

Add 3 to: 8, 18, 28, 38, 48, 58, 68, 78, 88
Subtract 8 from: 11, 10, 13, 9, 12, 8, 14, 15
Multiply by 5, then by 4:
 1, 3, 5, 7, 9, 11, 2, 4, 6, 8
Divide by 5: 5, 15, 25, 35, 45, 55, 10, 20, 30

- 1. Farmer Green has 7 black horses and 9 brown horses. How many horses does he have?
- 2. There are 11 eggs in one nest and 8 in another. How many more eggs are in one than in the other? ____
- 3. Every day Dick eats 5 oranges. How many does he eat in 8 days? ____
- 4. Oranges are 5 cents each. How many can Jim buy for 40 cents?
- 5. How many dimes are there in 70 cents?

13 - 711 - 915 - 714 - 817 - 915 - 613 - 611 - 214 - 615 - 815 - 917 - 8

Add 2 to: 9, 19, 29, 39, 49, 59, 69, 79, 89 Subtract 9 from: 11, 16, 14, 13, 12, 15, 18, 17 9×5 2×5 4×5 6×5 8×5 7×5

5)10	20	30	40	35	45	50	60	15
1 C	10	20 30	10	50	35. 4	5. 15		

 $\frac{1}{5}$ of: 10, 20, 30, 40, 50, 35, 45, 15

Mental 21

- 1. Rose had 17 jacks. She gave 9 of them to Peggy. How many had she then?
- 2. There were 2 books on one desk and 9 on another. How many books were on both desks?
- 3. Sue is 11 years old and Anne is 9. How much older is Sue than Anne? _
- 4. Find the cost of 6 pads at 5 cents each.
- 5. $\frac{1}{5}$ of 30 eggs is _____ eggs?

Drill 22

7 + 66 + 88 + 79 + 78 + 913 - 714 - 615 - 817 - 816 - 9

Add 4 to: 8, 18, 28, 38, 48, 58, 68, 78, 88 Subtract 8 from: 11, 13, 15, 17, 12, 14, 16, 10

Dubliace	0			
3×5 6×5	5×3 5×6	$15 \div 5$ $15 \div 5$	$15 \div 3$ $15 \div 6$	$\frac{1}{5}$ of 15 $\frac{1}{5}$ of 30
8×5 9×5	5×8 5×9	$40 \div 5$ $45 \div 5$	$40 \div 8$ $45 \div 9$	$\frac{1}{5}$ of 40 $\frac{1}{5}$ of 45

Mental 22

- 1. Tim saw 9 bluebirds and 8 blackbirds. How many birds did he see? __
- 2. There were 17 pencils in a box. If Sam took 8 of them out, how many were left?
- 3. How much will three 5-cent copybooks cost?
- 4. How many 5-cent copybooks can Ed buy for 15 cents? _
- 5. In 9 nickels there are ____ cents.

9 8 8 +9 +9 +8 +7 +7 +9 +8 +7 +9 +7 +5

Add 5 to: 7, 17, 27, 37, 47, 57, 67, 77, 87, 97 Subtract 7 from: 12, 14, 16, 11, 13, 15, 9, 8 5×2 7×2 9×2 11×2 6×2 12×2 8×2

2)222)122)16 2)18 2)102)14

 $16 \div 2$ $12 \div 2$ $18 \div 2$ $22 \div 2$ $14 \div 2$ $10 \div 2$

Mental 23

- 1. Betty made 9 paper hats and Jane made 9. How many hats did they make? ____
- 2. Nick has 18 chicks. If he gives 9 of them away, how many will he have left? ____
- 3. What must I pay for 9 candy sticks at 2 cents each? __
- 4. How many 2-cent taffies can Sam buy for 18 cents? ____
- 5. 14 days = ____ weeks.

Drill 24

18 17 16 16 15 15 14 14 14 13 13 13 -9 -8 -8 -6 -8 -6 -6 -9 -7 -6 -8 -4

Add 6 to: 6, 16, 26, 36, 46, 56, 66, 76, 86, 96 Subtract 6 from: 12, 15, 13, 10, 14, 9, 16

 10×3 11×3 9×3 6×3 8×3 4×3

 $\overline{21}$ 24 30 18 3)12

- 1. Bill saved 17 stamps. Tom saved 8. How many more did Bill save than Tom? __
- 2. Ray picked 9 pumpkins and Roy picked 8. How many did they pick together? ____
- 3. Betty has 3 apples. Her brother has 4 times as many. How many apples has her brother?
- 4. Three children picked 24 apples. How many did each child pick? __
- 5. 3 feet = 1 yard. ____ feet = 2 yards.

8 + 99 + 87+9 6+98 + 78 + 618-9 17-9 16-7 15-9 15-8 14-8 13-7 Add 3 to: 9, 19, 29, 39, 49, 59, 69, 79, 89, 99 Subtract 9 from: 12, 14, 18, 13, 15, 11, 16, 17 3×4 5×4 7×4 9×4 11×4 12×4 4)124)20 4)28 4)36 4)44 4)48 $12 \div 4$ $20 \div 4$ $28 \div 4$ $36 \div 4$ $44 \div 4$ $48 \div 4$

Mental 25

- 1. How much will nine 4-cent tops cost?
- 2. How many 4-cent plums can Sam buy for 36 cents?
- 3. May bought 3 plums and 9 peaches. How many pieces of fruit did she buy?
- 4. Ellen had 12 movie tickets. She gave 9 to Tim. How many had she then?
- 5. XV=____.

Drill 26

10 5 10 7 10 10 5 -6-72 1 -9

Add 6 to: 4, 14, 24, 34, 44, 54, 64, 74, 84, 94 Subtract 6 from: 10, 12, 14, 7, 9, 11, 13, 15

 2×5 4×5 6×5 8×5 10×5 9×5 5)10 5)205)30 5)40

5)45 $10 \div 5$ $20 \div 5$ $30 \div 5$ $40 \div 5$ $50 \div 5$ $45 \div 5$

5)50

Mental 26

- .. Joan ate 6 gum drops and Jean ate 4. How many did they both eat? _
- Ben has 10 sour balls. If he gives 4 to Jerry, how many will he have left?
- What must John pay for six 5-cent apple taffies?
- Five chocolate bars cost 30 cents. How much will 1 cost? ____
- . To find the sum we ___

Drill 27

4 10 5 10 3 10 +6 -4 +5 -5+7-3+8 -2-1

Add 3 to: 7, 17, 27, 37, 47, 57, 67, 77, 87, 97 Subtract 3 from: 10, 20, 30, 40, 50, 60, 70, 80

 4×2 6×3 7×4 9×4 8×5 9×5 2×4 3×6 4×7 4×9 5×8 5×9

 $3)\overline{18}$ $4)\overline{28}$ $4)\overline{36}$ $4)\overline{40}$ $5)\overline{45}$ $9)\overline{45}$ 2)8

Mental 27

- 1. Louis wants a 10-cent horn. He has 3 cents. How much more money does he need?
- 2. A 3-cent pen and a 7-cent pencil will cost ___ cents.
- 3. Nine boys are in one row. How many boys are there in 5 rows? ___
- 4. If 9 girls are in one row, how many rows will 45 girls need? __
- 5. The number after 225 is _

Drill 28

5 6 6 7 5 3 3 2 3 3 4 2 3 2 2 2 3 4 3 2 1 2 1 1 4 1 3 1 4

Add 2 to: 8, 18, 28, 38, 48, 58, 68, 78, 88 Subtract 2 from: 10, 20, 30, 40, 50, 60, 70

 1×6 3×6 6×1 6×3 3×6 0×6 2×6 4×6 6×2 6×4 1×6 6×0 $12 \div 6$ $24 \div 6$ $18 \div 6$ $6 \div 6$ $18 \div 3$ $24 \div 4$

- 1. Polly has 1 red ball, 4 white balls, and 5 blue balls. How many balls has she? _
- 2. Ed had 10 balloons. He gave 2 away. How many balloons had he left? _
- 3. Crayons cost 6 cents a box. How much will 4 boxes cost?
- 4. 6 boys caught 18 fish. How many fish did each boy catch? ___
- 5. The number before 221 is ____

6	7	6	8	9	$\begin{array}{c} 8 \\ 4 \\ \underline{2} \end{array}$	5	7	7	8	9	7
9	1	3	2	1	4	3	3	4	5	3	5
2	7	3	2	3	$\hat{2}$	5	3	3	2	3	4
<u> </u>	<u>U</u>	_	4	_	=	_	_	_	_	_	_

Add 1 to: 9, 19, 29, 39, 49, 59, 69, 79, 89, 99 Subtract 1 from: 10, 20, 30, 40, 50, 60, 70, 80

5×6 6×6	7×6 8×6	$^{6\times5}_{6\times6}$	$_{6\times8}^{6\times7}$	$_{6 imes9}^{9 imes6}$
------------	------------	--------------------------	--------------------------	------------------------

 $6\overline{)30} \quad 6\overline{)36} \quad 6\overline{)42} \quad 6\overline{)48} \quad 6\overline{)24} \quad 6\overline{)18} \quad 6\overline{)12}$

Mental 29

- 1. Mother uses 6 oranges a day. How many will she use in 6 days? ____
- 2. If 6 books cost 36 cents, what is the cost of 1 book? ____
- 3. Tom has 5 nuts. Tim has 3 nuts, and Jim has 5 nuts. How many nuts do they have?
- 4. Jack is 10 years old. How old was he one year ago? ____
- 5. 50 cents is equal to ____ dimes.

Drill 30

Q	1	8	6	6	9 4 <u>1</u>	7	7	9	8
J	-	O		ž	4	0	0	0	1
3	5	2.	4	4	4	3	Z	4	4
U	U	_	-	7	-	4	4	1	1
1	1	3	3	4	1	4	4	4	4
1	-	_	<u>~</u>	_	_	_	_	_	_

Add 4 to: 9, 19, 29, 39, 49, 59, 69, 79, 89, 99 Subtract 4 from: 13, 23, 33, 43, 53, 63, 73, 83

Dubliace		, , ,		
$^{9\times6}_{10\times6}$	$^{11\times6}_{12\times6}$	$^{6 imes9}_{6 imes10}$	$^{6 imes11}_{6 imes12}$	6×7 7×6

 $6\overline{)54}$ $6\overline{)60}$ $6\overline{)66}$ $6\overline{)72}$ $6\overline{)48}$ $6\overline{)36}$

Mental 30

- 1. There are 4 apples, 4 oranges and 6 pears in a box. How many pieces of fruit are in the box?
- 2. John has 13 tickets to sell. If he sells 4, how many will he have left? ____
- 3. There are 6 books on each desk. How many books are on 10 desks?
- 4. A jar of paste costs 6 cents. How many jars can Dick buy for 60 cents?
- 5. What number is missing? 6, 12, 18, 24, 36,

Drill 31

8	6	5	7	6	8	9	8	9	7
$\tilde{2}$	4	4	4	4	4	4	4	3	5
3	$\bar{4}$	5	4	5	4	3	6	9 3 <u>6</u>	3

Add 5 to: 8, 18, 28, 38, 48, 58, 68, 78, 88 Subtract 5 from: 13, 23, 33, 43, 53, 63, 73, 83

2×6	6×2	$12 \div 6$	$12 \div 2$	6×6
4×6	6×4	$24 \div 6$	$24 \div 4$	6×2
6×6	6×6	$36 \div 6$	$36 \div 6$	6×8
8×6	6×8	$48 \div 6$	$48 \div 8$	6×4

Multiply by 2, and then by 3: 7, 0, 2, 4, 6, 8, 10, 12, 3, 5, 9

Mental 31

- 1. At 6 cents each, how many toy cars can Nick buy if he has 48 cents? _____
- 2. Bob has 8 cents. His brother has 6 times as much. How much has his brother?
- 3. Roy has 5 cents, Ray has 4 cents, and Leo has 6 cents. How much do they have together? _____
- 4. How much less is 5 than 13?
- 5. How many 6's are there in 36? ____

Drill 32

Add 6 to: 7, 17, 27, 37, 47, 57, 67, 77, 87 Subtract 6 from: 13, 23, 33, 43, 53, 63, 73

1×6	6×1	$6 \div 6$	$6 \div 1$	8×6
3×6	6×3	$18 \div 6$	$18 \div 3$	6×8
5×6	6×5	$30 \div 6$	$30 \div 5$	4×6
7×6	6×7	$42 \div 6$	$42 \div 7$	6×4

Multiply by 2, and then by 3: 1, 6, 3, 8, 5, 10, 7, 9, 11, 0, 4

- 1. Don has 7 cents. How much more does he need to buy a 15-cent picture book?
- 2. In the grove there are 7 fruit trees and 6 shade trees. How many trees are there?
- 3. Find the cost of seven 6-cent candy sticks.
- 4. If 42 boys are seated in 6 rows, how many boys are in 1 row? ____
- 5. ____ feet = 1 yard.

10	12	14	16	18	11	13	. 15	17	18
-4									

Add 5 to: 9, 19, 29, 39, 49, 59, 69, 79, 89 Subtract 5 from: 14, 24, 34, 44, 54, 64, 74, 84

		, , , , , ,	
9×6	6×9	$54 \div 6$	$54 \div 9$
12×6	6×12	$72 \div 6$	$72 \div 12$
10×6	6×10	$60 \div 6$	$60 \div 10$
11×6	6×11	$66 \div 6$	$66 \div 11$

Multiply by 4, and then by 5: 0, 2, 4, 6, 8, 10, 12, 3, 5, 7, 9

Mental 33

Do you add or subtract?

- 1. When you know how much 1 book and 1 pencil cost, how do you find the cost of both?
- 2. When you know how many cents Ben had and how much he spent, how do you find how much he had left?
- 3. If you know Tim has some yellow pencils and some blue pencils, how will you find how many pencils he has? _
- 4. To find the difference, you must _
- 5. To find the sum, you must _____.

Drill 34

4 + 5	7 + 3	5 + 6	7 + 5	9 + 4
9-5	10 - 7	11 - 6	12 - 7	13 - 9
6+7	8+6	7 + 8	9 + 7	9 + 5
13 - 6	14 - 8	15 - 7	16 - 9	14 - 9

Add 6 to: 8, 18, 28, 38, 48, 58, 68, 78, 88, 98 Subtract 6 from: 14, 24, 34, 44, 54, 64, 74, 84 $2 \times 6 + 1$ $4 \times 6 + 2$ $6 \times 6 + 3$ $8 \times 6 + 2$ $10 \times 6 + 3$

6)12	$6\overline{)24}$	6)36	6)48	6)60
$12 \div 6$	$24 \div 6$	$36 \div 6$	$48 \div 6$	$60 \div 6$

Mental 34

Do you multiply or divide?

- 1. You know how much one false face costs. How will you find the cost of 5?
- 2. Sam knows the cost of 1 apple. If he wants to know how many he can buy for 15 cents, he must
- 3. To find $\frac{1}{3}$ of a number, we ______ by 3.
 4. To find 5 times a number, we ______ by 5.
 5. Paper hats are 6 cents each. How will you find the cost of 7? _

Drill 35

5 + 3	2 + 8	9 + 2	8+5
8 - 5	10 - 2	11 - 9	13 - 8
7 + 7	9+6	9 + 7	9 + 8
14 - 7	15 - 9	16 - 7	17 - 9

Add 7 to: 7, 17, 27, 37, 47, 57, 67, 77, 87 Subtract 7 from: 14, 24, 34, 44, 54, 64, 74

$$3 \times 6 + 2$$
 $5 \times 6 + 3$ $7 \times 6 + 4$ $9 \times 6 + 5$ $11 \times 6 + 4$

6)18	$6\overline{)30}$	$6\overline{)42}$	$6\overline{)54}$	$6\overline{)}\overline{6}\overline{6}$
18÷6	$30 \div 6$	$42 \div 6$	$54 \div 6$	$66 \div 6$

Mental 35

- 1. What must I pay for 5 tablets at 6 cents each? ___
- 2. How many 6-cent bags of peanuts can I buy for 30 cents? ___
- 3. In 504 there are ____ hundreds.
- 4. What is the sum of 7 and 7? _
- 5. What is left if we subtract 7 from 14?

Drill 36

2)124)246)36 8)48 10)60 12)72 $\frac{1}{6}$ of: 12, 18, 24, 30, 36, 6, 42, 48, 54, 60

- 1. Tony has 15 cents. If he buys a 6-cent orange, how much will he have left?
- 2. A pear costs 4 cents. How many can I buy if I have 24 cents? _
- 3. Harry has 9 walnuts and 6 butternuts. How many nuts has he? _
- 4. Joe has 24 marbles. If he gives Ted $\frac{1}{6}$ of them, how many will Ted have? ____
- 5. Write the Roman Number for 22.

$8 + _{} = 13$	$9 + \underline{\hspace{1cm}} = 13$	$5 + _{} = 13$
$7 + \underline{\hspace{1cm}} = 13$	$6 + \underline{\hspace{1cm}} = 13$	$4 + \underline{\hspace{1cm}} = 13$
$4 + \underline{\hspace{1cm}} = 14$	$8 + \underline{\hspace{1cm}} = 14$	$9 + _{} = 14$

Add 7 to: 8, 18, 28, 38, 48, 58, 68, 78, 88 Subtract 7 from: 15, 25, 35, 45, 55, 65, 75 Multiply by 4, by 5, and by 6:

9, 0, 2, 4, 6, 8, 10, 12, 1, 3, 5, 7

$\frac{1}{6}$ of 42 $\frac{1}{6}$ of 60	$\frac{1}{6}$ of 48 $\frac{1}{6}$ of 66	$\frac{1}{6}$ of 54 $\frac{1}{6}$ of 72
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Mental 37

- 1. Mother baked 8 apple pies and 7 peach pies. How many pies did she bake? ____
- 2. Rose has 15 story books. If she has read 7 of them, how many has she still to read?
- 3. Popcorn balls are 7 cents each. How much will 6 of them cost? ____
- 4. Six apple taffies cost 42 cents. How much will 1 cost? ____
- $\frac{1}{6}$ of 54 desks is ____ desks.

Drill 38

$$6+$$
__=14 $5+$ __=14 $9+$ __=15 $8+$ __=16 $7+$ _=14 $8+$ _=15 $9+$ _=16

Add 8 to: 8, 28, 48, 38, 78, 58, 68, 18, 88 Subtract 8 from: 16, 26, 46, 76, 56, 66, 36, 86 Multiply by 4, 5, and then by 6: 1, 3, 5, 7, 9, 11, 2, 4, 6, 8, 10

 $\frac{1}{6}$ of: 6, 18, 30, 42, 54, 66, 12, 24

Mental 38

- 1. 9 is how much less than 15? ____
- 2. Betsy read 8 pages of her book on Monday, and 8 pages on Tuesday. How many pages did she read? ____
- 3. Sue has 16 orange slices. If she eats 8 of them, how many will she have left?
- 4. Nancy saw 9 squirrels. Molly saw 6 times as many. How many did Molly see?
- 5. Fred has 54 nuts to divide among 6 boys. How many nuts will each boy have?

Drill 39

Say 2, 5, 9:

2+3+4	2+3+6	4+1+8	3+4+8
3 + 3 + 3	3 + 3 + 6	4 + 4 + 5	4+4+8
$9 \pm 1 \pm 1$	$9 \pm 4 \pm 7$	$1 \perp 2 \perp 8$	5 エ 1 エ 7

Add 7 to: 9, 19, 49, 39, 29, 59, 69, 79, 89 Subtract 7 from: 16, 46, 36, 86, 56, 66, 96

0×6	$\times 6 = 0$	6) 0	$0 \div 6$
2×6	$\times 6 = 12$	$6)\overline{12}$	$12 \div 6$
4×6	$\times 6 = 24$	$6)\overline{24}$	$24 \div 6$
6×6	$\times 6 = 36$	$6)\overline{36}$	$36 \div 6$
8×6	$\times 6 = 48$	6)48	$48 \div 6$

Mental 39

- 1. 7 boys and 9 girls came to Peter's party. How many children were there?
- 2. The children are going to play 16 games. If 7 of them are over, how many games have they yet to play? ____
- 3. If 6 children are sitting at each table, how many children are at 4 tables? ____
- 4. There are 24 lollipops to be divided among 4 boys. How many will each boy have?
- 5. How many 6's in 48? ____

Drill 40

2+5+3	2+3+7	4+5+6	4 + 4 + 9
4+4+2	3+5+5	2+6+7	0+9+8
4 + 3 + 4	4 + 4 + 6	3+6+7	2+7+9

Add 8 to: 9, 19, 39, 29, 49, 79, 69, 99, 89 Subtract 8 from: 17, 47, 27, 87, 77, 67, 37

3×6	$\times 6 = 18$	$6)\overline{18}$	$18 \div 6$
5×6	$\times 6 = 30$	6)30	$30 \div 6$
7×6	$\times 6 = 42$	6)42	$42 \div 6$
9×6	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	$6)\overline{54}$	$54 \div 6$
11×6	$\times 6 = 66$	6)66	$66 \div 6$

- 1. Dan made 9 paper hats. Dick made 8. How many did they both make? ____
- 2. There are 17 paper plates on the table. 8 of them are being used. How many are not being used?
- 3. Each boy has 6 cookies. How many cookies do 9 boys have?
- 4. There are 54 lemon drops for 6 girls. How many lemon drops will each girl have?
- 5. XXV means ____

$9 + _{} = 18$	$6 + \underline{\hspace{1cm}} = 15$	$3 + \underline{\hspace{1cm}} = 12$
$8 + _{} = 17$	$5 + \underline{\hspace{1cm}} = 14$	$2 + \underline{\hspace{1cm}} = 11$
$7 + _{} = 16$	4+=13	1+=10
	$7 + _{} = 14$	$6 + \underline{\hspace{1cm}} = 12$

Add 9 to: 9, 19, 59, 89, 49, 29, 79, 39, 99

Subtract 9 from: 18, 48, 38, 28, 58, 88, 78, 68

$$12 = \underline{\hspace{1cm}} \times 6$$
 $54 = \underline{\hspace{1cm}} \times 6$ $30 = \underline{\hspace{1cm}} \times 6$
 $48 = \underline{\hspace{1cm}} \times 6$ $42 = \underline{\hspace{1cm}} \times 6$ $60 = \underline{\hspace{1cm}} \times 6$

$$18 = \times 6$$
 $24 = \times 6$ $36 = \times 6$

$\frac{1}{6}$ of: 72, 54, 36, 6, 48, 30, 60, 42, 24

Mental 41

- 1. Bobby has 9 big apples. How many more does he need to make 18?
- 2. Grace has 9 paper cups and Nell has 9. How many paper cups do both girls have?
- 3. How much must Susan pay for 8 doll dishes at 6 cents each?
- 4. Nancy has 48 doll dresses. If she gives \(\frac{1}{6} \) of them to Susan, how many will Susan have? \(\to \to \text{...} \)
- 5. ____ tens + 8 units = 68

Drill 42

Add 4 to: 6, 16, 26, 56, 46, 36, 66, 76, 86 Subtract 6 from: 10, 20, 30, 49, 50, 60, 70

$$2 \times 1 + 1$$
 $2 \times 5 + 1$ $2 \times 2 + 1$ $2 \times 6 + 1$ $2 \times 3 + 1$ $2 \times 7 + 1$ $2 \times 4 + 1$ $2 \times 8 + 1$

 $\frac{1}{2}$ of: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20

Mental 42

- L. What is the sum of 7 and 0? ____
- 2. When we take 0 from 3, how much do we have left?
- 3. At Sally's party, there were 6 boys and 4 girls. How many children were at the party?
- 1. There were 10 children at the party. ½ of them were boys. How many boys were at the party?
- 5. feet = 1 yard.

Drill 43

$$9\overline{)0}$$
 $8\overline{)0}$ $7\overline{)0}$ $6\overline{)0}$ $5\overline{)0}$ $4\overline{)0}$ $3\overline{)0}$

Add 7 to: 3, 13, 23, 43, 63, 53, 33, 73, 83 Subtract 7 from: 10, 20, 30, 40, 59, 60, 70, 80

$$3 \times 4 + 1$$
 $3 \times 7 + 1$ $3 \times 2 + 1$ $3 \times 5 + 1$ $3 \times 8 + 1$ $3 \times 3 + 1$ $3 \times 6 + 1$ $3 \times 9 + 1$

 $\frac{1}{3}$ of: 15, 12, 18, 21, 27, 24, 6, 9, 30

Mental 43

- 1. $5 \times 0 =$ _____
- 2. When we divide zero by 8, the answer is ____
- 3. Jimmy is 7 years old. Don is 10. What is the difference in their ages?
- 4. Fred sold 3 circus tickets and Ben sold 7. How many did they both sell?
- **5.** ____ ounces = 1 pound.

Drill 44

1	3	5 0	7	9	2	4	6	8
0	0	0	0	0	0	0	0	0
_	-	_	_	_	_	_	_	_

Add 8 to: 2, 12, 22, 32, 42, 51, 62, 72, 82

Subtract 8 from: 10, 20, 30, 40, 59, 60, 79

$$4 \times 4 + 2$$
, $4 \times 7 + 2$, $4 \times 2 + 2$, $4 \times 5 + 2$, $4 \times 8 + 2$, $4 \times 3 + 2$, $4 \times 6 + 2$, $4 \times 9 + 2$

 $\frac{1}{4}$ of: 4, 12, 16, 24, 32, 36, 8, 20, 28

- 1. If there are no pencils in the box and Peggy puts 5 in, how many pencils are then in the box?
- 2. 9 cents -9 cents = cents.
- 3. 68 cents = ____ dimes and ____ cents.
- 4. Betty writes 5 spelling words each day. How many words does she write in 4 days?
- **5.** $\frac{1}{4}$ of 20 apples = ____ apples.

1 + 0	5 - 0	5×0	8×0	2+0
4 - 0	4×0	7×0	3+0	3 - 0
3×0	6×0	4 + 0	2 - 0	2×0

Add 9 to: 1, 11, 21, 31, 41, 51, 60, 71, 81 Subtract 9 from: 10, 20, 30, 40, 59, 60, 70

$$5 \times 5 + 3$$
 $5 \times 8 + 3$ $5 \times 2 + 3$ $5 \times 6 + 3$ $5 \times 9 + 3$ $5 \times 3 + 3$ $5 \times 7 + 3$ $5 \times 4 + 3$

 $\frac{1}{5}$ of: 5, 10, 15, 20, 40, 30, 25, 45, 55

Mental 45

- Tom read 5 pages of his book on Monday and no pages on Tuesday. How many pages did he read?
- 2. Harry spelled 10 words. Dick spelled 9. How many more did Harry spell than Dick?
- 3. Helen had 15 books. She read $\frac{1}{5}$ of them. How many did she read? ____
- 4. Joe is 6 years old. His mother is 5 times as old. How old is his mother?
- 5. What number comes before 867? _____

Drill 46

Add 6 to: 5, 15, 25, 35, 45, 52, 65, 75, 85 Subtract 6 from: 11, 21, 31, 41, 58, 61, 71

$$6 \times 4 + 3$$
 $6 \times 7 + 3$ $6 \times 2 + 3$ $6 \times 5 + 3$ $6 \times 8 + 3$ $6 \times 3 + 3$ $6 \times 6 + 3$ $6 \times 9 + 3$

¹/₆ of: 6, 18, 12, 36, 30, 24, 42, 48

Mental 46

Should we add or subtract?

- 1. There are 28 boys and 18 girls in Don's class. To find how many children there are, we should _____.
- 2. Dick is 6 years old. To find out how old he will be in 5 years, we should _____.
- 3. Mary is 11 years old. Nell is 6. To find the difference in their ages, we should _____.
- 4. Mother baked 15 cakes. The children sold 8 of them. To find how many were left, we should
- 5. To find how much Bill will have to pay for a 9-cent ball and a 7-cent balloon, we should _____.

Drill 47

Add 7 to: 4, 14, 24, 34, 44, 52, 64, 74, 84, 94 Subtract 7 from: 11, 21, 31, 41, 59, 61, 71, 81 $5\times4+2$ $5\times7+2$ $5\times2+2$ $5\times5+2$ $5\times8+2$ $5\times3+2$ $5\times6+2$ $5\times9+2$ $\frac{1}{5}$ of: 20, 30, 35, 40, 10, 50, 45, 15

Mental 47

Should we multiply or divide?

- 1. Each child made 8 picture books. How many did 5 children make? To find the answer we _____.
- 2. 5 children draw 40 pictures. To find how many pictures each child draws, we should
- To find ½ of a number we _____ by 5.
 Bill caught 7 fish. Father caught 5 times
- as many. To find how many fish father caught, we should _____.
- 5. To find the cost of 5 horns at 9 cents each, we should _____.

Drill 48

Add 8 to: 3, 13, 23, 33, 41, 53, 63, 73, 83 Subtract 3 from: 11, 21, 31, 41, 54, 61, 71, 81

$$4 \times 4 + 3$$
 $4 \times 7 + 3$ $4 \times 2 + 3$ $4 \times 5 + 3$ $4 \times 8 + 3$ $4 \times 3 + 3$ $4 \times 6 + 3$ $4 \times 9 + 3$

¹ of: 4, 16, 24, 36, 40, 32, 20, 28

- 1. The milkman brought 8 bottles of white milk and 3 bottles of chocolate. How many bottles did he bring? ____
- 2. If there are 17 bottles of milk in the box and 9 of them are white, how many bottles of chocolate milk are there?
- 3. Each child must pay 7 cents for milk. How much must 4 children pay? ____
- 4. If 4 small bottles of milk cost 28 cents, how much must Patsy pay for 1 bottle? ____
- 5. $\frac{1}{4}$ of 36 peaches = ____ peaches.

9	7 9	8	9	$\frac{7}{3}$	$\frac{4}{7}$	67	9 6	8 9	
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Add 9 to: 2, 12, 22, 32, 41, 52, 62, 72, 82, 92 Subtract 2 from: 11, 21, 31, 41, 59, 61, 71, 81

 $\frac{1}{5}$ of: 10, 20, 30, 40, 50, 60

Mental 49

- 1. John read 9 story books and Joan read 2. How many books did both children read?
- 2. Mary had 11 books. 2 had animal stories in them. The others were funny stories. How many funny story books did she have?
- 3. Nancy read 6 short stories each day. How many did she read in 3 days? _____
- 4. Mother divided 18 books among her 6 boys. How many books did each boy have?
- 5. $\frac{1}{5}$ of 60 pages = ____ pages.

Drill 50

Add 8 to: 4, 14, 24, 34, 44, 51, 64, 74, 84, 94 Subtract 4 from: 12, 22, 32, 42, 56, 72, 82, 92

9×2 6×3 7×4	$\begin{array}{c} 4\times5\\ 3\times6\\ 7\times2 \end{array}$	8×3 9×4 7×5	7×6 8×2
1 / 4	7×2	7×5	9×3

 $\frac{1}{6}$ of: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

Mental 50

- Sister gave 2 new books to each child. How many books did she give to 9 children?
- 2. 9 children brought 18 books for the library. How many did each child bring? ____
- 3. In the class library, there were 8 books about God and 4 books about angels. How many books were there?
- I. There were 12 books on the shelf. Grace read 4 of them. How many has she yet to read?
- i. David brought \(\frac{1}{6} \) of his 54 books to school. How many books did he bring?

Drill 51

Add 7 to: 5, 15, 25, 35, 45, 55, 62, 75, 85, 91 Subtract 5 from: 12, 22, 32, 42, 58, 62, 78, 82 6×2 2×6 $12 \div 2$ $12 \div 6$ ½ of 12 9×3 3×9 $27 \div 3$ $27 \div 9$ $\frac{1}{3}$ of 27 8×4 4×8 $32 \div 4$ $32 \div 8$ $\frac{1}{4}$ of 32

 7×5 5×7 $35 \div 5$ $35 \div 7$ $\frac{1}{5}$ of 35 4×6 6×4 $24 \div 6$ $24 \div 4$ $\frac{1}{6}$ of 24

Mental 51

- 1. Tom had 9 toy soldiers and John had 8. How many did they both have? ____
- 2. 7 boys and 5 girls received prizes. How many children received prizes? ____
- 3. There are 16 boys in our class. 8 of them are absent. How many are not absent?
- 4. Jim earns 8 cents each day. How much does he earn in 4 days?
- 5. Ellen did 24 problems. $\frac{1}{6}$ of them were wrong. How many were wrong?

Drill 52

Add 6 to: 6, 16, 26, 33, 46, 56, 66, 72, 86, 96 Subtract 6 from: 12, 22, 38, 42, 52, 62, 72, 88

$$7)\overline{7}$$
 $7 \div 7 \cdot 7)\overline{21}$ $21 \div 7$ $7 \times \underline{\hspace{1cm}} = 7$

$$7)\overline{14}$$
 $14 \div 7$ $7)\overline{28}$ $28 \div 7$ $7 \times \underline{\hspace{1cm}} = 14$

- Mary sold 7 pumpkins and Betty sold 8. How many pumpkins did they both sell?
- 2. Bill sold 12 tickets for the card party. Ed sold 6. How many more did Bill sell than Ed? ____
- 3. I have 13 cents. How much will I have left if I spend 6 cents?
- 4. What must I pay for three 7-cent jars of paste? ____
- 5. How many 7-cent apple taffies can I buy for 21 cents? ____

Add 9 to: 3, 13, 23, 30, 43, 52, 63, 73, 83 Subtract 3 from: 12, 22, 35, 42, 55, 62, 72, 82

5×7 7×7	7×5 7×7	$\begin{array}{c} 6 \times 7 \\ 8 \times 7 \end{array}$	7×6 7×8
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$$7)\overline{35}$$
 $35 \div 7$ $7)\overline{49}$ $49 \div 7$ $7 \times \underline{\hspace{1cm}} = 35$

$$7)\overline{42}$$
 $42 \div 7$ $7)\overline{56}$ $56 \div 7$ $7 \times \underline{\hspace{1cm}} = 42$

Mental 53

- 1. Helen read 9 stories on Saturday and 3 stories on Sunday. How many stories did she read?
- 2. Jack said 12 little prayers. Mary said only 3. How many more did Jack say than Mary? ____
- 3. In our room there are 7 children in the band. 5 times that many are not in the band. How many are not in the band?
- 4. Tom saved 56 cents in 7 days. How much did he save each day? ____
- **5.** ___ minutes = 1 hour.

Drill 54

Add 9 to: 4, 14, 24, 34, 40, 54, 62, 74, 84, 94 Subtract 9 from: 13, 23, 33, 44, 53, 69, 73, 83

10×7 12×7	$\substack{7\times10\\7\times12}$	$^{11\times7}_{9\times7}$	$7 \times 11 \\ 7 \times 9$
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$$7)\overline{70}$$
 $70 \div 7$ $7)\overline{84}$ $84 \div 7$ $7 \times \underline{\hspace{1cm}} = 56$

$$7)\overline{77}$$
 $77 \div 7$ $7)\overline{63}$ $63 \div 7$ $7 \times \underline{\hspace{1cm}} = 49$

Mental 54

- 1. Dick has 7 cents. Joe has 9 times as much. How much money has Joe?
- 2. In one week there are 7 days. How many weeks are there in 63 days?
- 3. May has 9 dimes. Sally has 4 dimes. How many dimes do they both have?
- 4. 13 children passed the church. 9 of them made a visit. How many did not make a visit? ____
- 5. What number comes between 856 and 858?

Drill 55

Add 8 to: 5, 15, 25, 31, 45, 55, 60, 75, 85, 95 Subtract 8 from: 13, 23, 33, 49, 58, 63, 73, 83

1×7 2×7 3×7	7×1 7×2 7×3	$7 \div 7$ $14 \div 7$ $21 \div 7$	$7 \div 1$ $14 \div 2$ $21 \div 3$	7×3 7×4 7×2 7×1
4×7	7×4	$28 \div 7$	$28 \div 4$	7×1

 $\frac{1}{7}$ of 7 $\frac{1}{7}$ of 14 $\frac{1}{7}$ of 21 $\frac{1}{7}$ of 28

Mental 55

- 1. Bill saves 7 cents each day. How much will he save in 4 days? ____
- 2. Mr. Cook divided 28 cents among 7 boys. How much did each boy receive? ____
- 3. In our room 8 girls and 5 boys take singing lessons. How many children take singing lessons?
- 4. Sally gave 13 pennies to the missions. Bob gave 8. How many more did Sally give than Bob? ____
- 5. ½ of 28 girls take singing lessons. How many girls take singing lessons? _____

Drill 56

Add 7 to: 6, 16, 26, 31, 46, 52, 66, 76, 86, 96 Subtract 7 from: 13, 23, 33, 48, 53, 69, 73, 83

5×7 6×7 7×7 8×7	7×5 7×6 7×7 7×8	$35 \div 7$ $42 \div 7$ $49 \div 7$ $56 \div 7$	$35 \div 5$ $42 \div 6$ $49 \div 7$ $56 \div 8$
$\frac{1}{7}$ of 35	$\frac{1}{7}$ of 42	$\frac{1}{7}$ of 49	$\frac{1}{7}$ of 56

- Mary said 8 Hail Marys. Her mother said 7 times as many. How many Hail Marys did her mother say? ____
- 2. Billy had 56 cents. He put $\frac{1}{7}$ of his money in the poor-box. How much did he put in the poor-box?
- 3. In our room 7 boys are Cub Scouts. In the fourth grade 6 boys are Cub Scouts. How many Cubs are there in both rooms?
- 4. Sister has 13 books. She gives 7 of them to Jane. How many has she left? ____
- 5. Which number is larger? 265 or 562? ___

Add 9 to: 5, 15, 25, 30, 45, 55, 63, 75, 85, 95 Subtract 9 from: 14, 24, 34, 49, 54, 68, 74, 84

† of: 63, 70, 77, 84, 56, 35, 49, 42 Multiply by 2 and then by 3: 3, 5, 7, 9, 11, 2, 4, 6, 8, 10, 12

Mental 57

- 1. There were 63 Indians sitting at 7 tables. How many Indians were at each table?
- 2. ½ of 70 Indians did not come to the feast. How many did not come? ____
- 3. If there were 9 Pilgrims at one table and 5 at another, how many were at both tables? ____
- 4. There were 14 Pilgrims and 9 Indians in a group. There were ____ more Pilgrims than Indians. ____
- 5. ____ ounces = $\frac{1}{2}$ pound.

Drill 58

Add 8 to: 6, 16, 26, 36, 40, 56, 62, 76, 86, 96 Subtract 8 from: 14, 24, 34, 59, 64, 78, 84, 44

 $2 \times 7 + 3$ $4 \times 7 + 2$ $6 \times 7 + 4$ $8 \times 7 + 1$

 $7\overline{)14}$ $7\overline{)28}$ $7\overline{)42}$ $7\overline{)56}$

 $14 \div 7$ $28 \div 7$ $42 \div 7$ $56 \div 7$

Multiply by 3 and then by 4: 12, 10, 8, 6, 4, 2, 11, 9, 7, 5

Mental 58

- l. John saw 8 green cars and 6 red cars. How many cars did he see? ____
- . When we add, our answer is called the __
- When we subtract, our answer is called the _____.
- . 14 is how much more than 8? ____
- How much less than 14 is 8?

Drill 59

Add 7 to: 7, 17, 27, 34, 47, 52, 67, 77, 87, 97 Subtract 7 from: 14, 24, 39, 44, 58, 64, 74, 84

 $1 \times 7 + 5$ $3 \times 7 + 6$ $5 \times 7 + 5$ $7 \times 7 + 1$

 $7)\overline{7}$ $7)\overline{21}$ $7)\overline{35}$ $7)\overline{49}$ $7)\overline{42}$ $7)\overline{28}$ $7 \div 7$ $21 \div 7$ $35 \div 7$ $49 \div 7$

Multiply by 4 and then by 6: 2, 4, 6, 8, 10, 12, 3, 5, 7, 9, 11

Mental 59

- 1. Mother baked 7 apple pies and 7 peach pies. How many pies did she bake? ____
- 2. Susan wrote 14 spelling words. 7 were wrong. How many were right? ____
- 3. There are 7 boys in a row. How many boys are there in 5 rows?
- 4. 21 children were working in 3 groups. How many were in each group?
- 5. Which number is smaller? 723 or 237?

Drill 60

Add 9 to: 6, 16, 26, 30, 46, 54, 66, 76, 86, 96 Subtract 9 from: 15, 25, 35, 49, 55, 64, 75, 89 Multiply seven: 2's, 4's, 6's, 8's, 10's, 12's

7)14 7)28 7)42 7)56 7)70 7)84

Multiply by 5 and then by 6:
1, 3, 5, 7, 9, 2, 4, 6, 8, 10, 12

- 1. Rose has 15 cents. Tom has 9 cents. How much more has Rose than Tom? ____
- 2. Dick saved 9 cents and Don saved 6 cents. How much did they both save?
- 3. $28 \div 7 =$ _____.
- 4. Write the Roman number for 26.
- 5. One piece of jelly roll costs 7 cents. How much will 6 pieces cost?

$9 + _{} = 17$	$8 + \underline{\hspace{1cm}} = 16$	$7 + \underline{\hspace{1cm}} = 15$
$6 + \underline{\hspace{1cm}} = 14$	$8 + \underline{\hspace{1cm}} = 16$ $5 + \underline{\hspace{1cm}} = 13$	$8 + \underline{\hspace{1cm}} = 17$

Add 8 to: 7, 17, 29, 37, 49, 59, 67, 77, 87, 97 Subtract 8 from: 15, 25, 34, 45, 52, 65, 75, 85

1×8	8×1	8)8	$8 \div 8$
2×8	8×2	8)16	$16 \div 8$
3×8	8×3	$8\overline{)24}$	$24 \div 8$
4×8	8×4	$8\overline{)32}$	$32 \div 8$

Mental 61

- 1. Tom said 8 little prayers to the Infant. John said 15. How many more did John say than Tom?
- 2. At 8 cents each how many paper dolls can Nancy buy if she has 24 cents? ____
- 3. Candy toys are 8 cents each. How much money do I need to buy 3 of them?
- 4. It takes the big hand of the clock ____ minutes to go from one number to the next.
- 5. It takes the small hand of the clock ____ minutes to go from one number to the next.

Drill 62

+9=17	+5=13	+7=15
+8 = 16	+6=14	+9=18

Add 8 to: 8, 18, 24, 38, 40, 58, 68, 78, 88, 98 Subtract 8 from: 16, 26, 34, 46, 53, 66, 76, 86

5×8	8×5	$8\overline{)40}$	$40 \div 8$
6×8	8×6	$8)\overline{48}$	48 ÷8
7×8	8×7	8)56	$56 \div 8$
8×8	8×8	$8\overline{)64}$	$64 \div 8$

Mental 62

- 1. If I save 8 cents each day, how much money will I have in 7 days?
- 2. Dad saved 8 dollars this week and 8 dollars last week. How much money did he save? _____
- 3. What must Robert pay for 1 toy train if 8 of them cost 56 cents?
- 4. Mary sent 8 cards to her friends. Mother sent 16. How many more cards did her mother send?
- 5. What number is missing? 8, 16, 32, 40, 48

Drill 63

$$9+$$
___=18 $7+$ __=16 $4+$ __=15 $9+$ __=13

Add 9 to: 7, 17, 25, 37, 46, 57, 67, 77, 87, 97 Subtract 9 from: 16, 26, 35, 46, 56, 60, 76, 86

10×8	8×10	8)80	$80 \div 8$
11×8	8×11	8)88	$88 \div 8$
12×8	8×12	8)96	$96 \div 8$
9×8	8×9	8)72	$72 \div 8$

Mental 63

- 1. Mother bought 9 red candles and 7 green ones. How many candles did she buy? ____
- 2. If 9 children give 8 cents each to the poor, how much money will they give altogether?
- 3. Joan needs 16 seals for her packages. If she has 9, how many more must she buy?
- 4. Joe says that 8 candy canes cost 72 cents. What must be pay for one?
- 5. 9×8 is the same as $8\times$ ____.

Drill 64

Add 9 to: 8, 18, 28, 34, 48, 56, 68, 78, 88, 98 Subtract 9 from: 17, 27, 34, 47, 57, 66, 77, 87

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
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 $\frac{1}{8}$ of 8 $\frac{1}{8}$ of 16 $\frac{1}{8}$ of 24 $\frac{1}{8}$ of 32

- 1. Rose said 9 Hail Marys and Ellen said 8. How many did they both say? ____
- 2. At 8 cents each, how many birthday cards can Peter buy for 32 cents? ____
- 3. There are 32 children standing in 4 ever lines. How many children are there in each line?
- 4. In the box there were 17 large balls. Bot took out 9. How many were left in the box?
- 5. To find $\frac{1}{8}$ of a number, we divide the number by $\underline{\hspace{1cm}}$

9+=18	9+=17	9+=16
9+=15	9+=14	9+=13

Add 9 to: 9, 19, 29, 38, 49, 59, 62, 79, 89, 99 Subtract 9 from: 18, 28, 34, 48, 58, 60, 78, 88,

6×8 8×6 $48 \div 8$ $48 \div 6$ $- \times 8 = 48$ 7×8 8×7 $56 \div 7$ $- \times 8 = 56$	7×8	8×7	$48 \div 8$ $56 \div 8$	$40 \div 5$ $48 \div 6$ $56 \div 7$	
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Mental 65

- 1. Anne had 9 picture books. Mother bought her 9 more. How many had she then?
- 2. Mother divided 64 Santa pops among her 8 girls. How many did each girl have?
- 3. Uncle John had 18 dollars. He spent \$9. How much had he left? _
- 4. There are 48 stars in a box. $\frac{1}{8}$ of them are red. How many red stars are in the box?
- 5. Write the number that comes just before 3,112 _____

Drill 66 8+___=15

 $8 + \underline{\hspace{1cm}} = 17$

8+=11		=16	8+=13
Add 7 to: 8, 1	8, 23, 38	3, 48, 58,	67, 78, 88, 98
Subtract 7 from	n: 15, 28	5, 33, 45,	55, 67, 75, 85
$\frac{1}{8}$ of 72 $\frac{1}{8}$	of 80	½ of 88	$\frac{1}{8}$ of 96
9×8 8×9 10×8 8×10 11×8 8×11 12×8 8×12	$72 \div 8$ $80 \div 8$ $88 \div 8$ $96 \div 8$	$72 \div 9$ $80 \div 10$ $88 \div 11$ $96 \div 12$	X8 = 72 X8 = 80 X8 = 88 X8 = 96

Mental 66

- 1. There were 15 girls and 7 boys in the Christmas play. How many more girls than boys were in the play?
- 2. Little engines are 8 cents each. How much will 10 of them cost? _
- 3. There were 72 toy taffies in the box. $\frac{1}{8}$ of them were broken. How many were broken? _
- 1. If 8 boys are in each row, how many rows will 72 boys need?
- 5. Write the number that comes after 2,675

Drill 67

Add 6 to: 7, 17, 25, 37, 47, 57, 68, 77, 87, 97 Subtract 6 from: 13, 23, 35, 43, 55, 63, 73 $2 \times 8 + 2$ $4 \times 8 + 4$ $6 \times 8 + 2$ $8 \times 8 + 3$ $7 \times 8 + 4$ Divide by 8: 32, 48, 64, 56, 16, 40 Multiply by 2, and then by 3: 2, 4, 6, 8, 0, 2, 1, 2, 3, 5, 7

Mental 67

- 1. In our flag there are 6 white stripes and 7 red ones. How many stripes are in the flag?
- 2. Joseph saved 8 cents each day. How much did he save in 8 days? __
- 3. If Mary saves 8 cents each day, how many days will she need to save 64 cents?
- 4. Mother hid 13 pennies. The children found 6 of them. How many were not found? ____
- 5. What number comes between 2,165 and 2,167? __

Drill 68

Add 9 to: 5, 15, 26, 35, 45, 55, 66, 75, 85, 95 Subtract 9 from: 14, 24, 36, 44, 54, 64, 75, 84 $1 \times 8 + 5$ $5 \times 8 + 5$ $3 \times 8 + 5$ $7 \times 8 + 4$ $6 \times 8 + 3$ Divide by 8: 64, 16, 32, 56, 40, 24, 48, 72 Multiply by 3 and then by 4: 1, 3, 5, 7, 2, 4, 6, 8

Mental 68

- 1. Cookies are 8 cents each. How many can Ann buy for 40 cents?
- 2. There are 8 cup cakes in each box. How many are in 5 boxes?
- 3. The Burns family have 9 children. The Hall family have 5. How many children do both families have? _
- 4. Tippy ate 14 peanuts. Jumbo ate 9. Jumbo ate ____ less than Tippy.
- 5. Mother bought 1 dozen eggs. How many eggs did she buy? _

 $8 + \underline{\hspace{1cm}} = 13$

Add 8 to: 5, 15, 25, 34, 45, 55, 65, 73, 85, 95 Subtract 8 from: 13, 23, 32, 43, 53, 63, 70, 83 Multiply eight: 2's, 4's, 6's, 8's, 3's, 7's

8)96 8)80 8)64 8)48 $8)\overline{32}$ 8)16Multiply by 5 and then by 6:

4, 10, 8, 6, 4, 2, 0, 3, 5, 7

Mental 69

- 1. Bobby gave 6 cents to a poor child. Mother gave 8 times as much. How much did Mother give?
- 2. How much will one toy boat cost if 8 of them cost 48 cents?
- 3. 8 girls and 5 boys went to see the pet show. How many children saw the show? _
- 4. There were 13 pets in the parade. 8 of them won prizes. How many did not? ___
- 5. John bought ½ pound of tea. How many ounces did he buy? ____

Drill 70

Add 9 to: 6, 16, 46, 35, 26, 56, 86, 73, 66, 96 Subtract 9 from: 15, 25, 36, 65, 55, 45, 88, 75

		00	0.70	3×9	9×3
$^{1\times9}_{4\times9}$	9×1 9×4	$\begin{array}{c} 2 \times 9 \\ 3 \times 9 \end{array}$	9×2 4×9		2×9

$$9\overline{)9}$$
 $9 \div 9$ $9\overline{)18}$ $18 \div 9$ $\times 9 = 27$

$$9\overline{)27}$$
 $27 \div 9$ $9\overline{)36}$ $36 \div 9$ $\times 9 = 36$

Mental 70

- 1. One baseball suit costs \$9.00. How much will 4 suits cost? __
- How many 2. There are 9 boys in each row. rows will 36 boys need? _
- Another is 3. One stick is 15 inches long. only 9 inches long. How much longer is one than the other? _
- 4. Write three dollars with the dollar sign and decimal point. -
- 5. What number is missing? 9, 18, 27, 45, 54,___

Drill 71

Add 4 to: 9, 19, 29, 38, 69, 57, 49, 99, 89, 79 Subtract 4 from: 13, 23, 32, 43, 53, 61, 83, 73, 93 5×9 9×5 6×9 9×6 7×9 9×7 8×9 9×8 $45 \div 9 \quad 9\overline{)54} \quad 54 \div 9 \quad 9\overline{)63} \quad 63 \div 9 \quad 9\overline{)72}$ 9)45

Mental 71

- 1. Paul had 54 cents. He divided his money among 9 boys. How much did each boy have? _____
- 2. 9 boys are needed for 1 team. How many boys are needed for 6 teams? _____
- 3. What is the sum of \$.19 and \$.04?
- 4. Bob made 13 snowballs. Jim made 4. How many more did Bob make than Jim? _
- 5. Sally has 1 yard of ribbon. How many inches of ribbon does she have? __

Drill 72

Add 8 to: 9, 19, 49, 36, 29, 59, 89, 77, 69, 99 Subtract 8 from: 17, 27, 35, 47, 57, 87, 73, 67, 97 9×12 12×9 9×11 11×9 10×9 9×10 9×6 6×9 9×7 7×9 8×9 9×8

$108 \div 9$ 9)108 $99 \div 9$ 9)99 9)90 $90 \div 9$

- 1. There are 72 boys on 8 teams. How many boys are on one team? _
- 2. On Saturday each boy earned \$.09. How much did 8 boys earn? _
- 3. Mother paid \$8.00 for Mary's dress and \$9.00 for Carol's dress. How much did they botl cost?
- 4. John is 17 years old. Dick is 8 years old What is the difference in their ages? ____
- 5. In \$.75 there are ____ dimes and ____ cents

Add 9 to: Subtract 9	7, 17, 2 from: 1	7, 36, 47, 67, 57, 16, 26, 35, 46, 76,	73, 87, 97 64, 56, 86
1×9 2×9 3×9 4×9	9×1 9×2 9×3 9×4	$9 \div 9$ $18 \div 9$ $27 \div 9$ $36 \div 9$	$9 \div 1$ $18 \div 2$ $27 \div 3$ $36 \div 4$
$\frac{1}{9}$ of 9 $\frac{1}{9}$	of 18 ½	$\frac{1}{9}$ of 27 $\frac{1}{9}$ of 36	½ of 45

Mental 73

- 1. Dad paid \$.27 for 9 stamps. How much did he pay for each?
- 2. Sarah has \$.26. Betty has \$.09. How much more has Sarah than Betty?
- 3. \$.09 and \$.27 are _____
- 4. How much will three 9-cent picture books cost?
- 5. To find \(\frac{1}{9}\) of a number, we divide the number by _____.

Drill 74

Add 6 to: 8, 18, 28, 37, 48, 56, 78, 98, 68, 88 Subtract 6 from: 14, 24, 35, 44, 55, 74, 94, 64 5×9 9×5 $45 \div 9$ $45 \div 5$ 6×9 9×6 $54 \div 9$ $54 \div 6$ 7×9 9×7 $63 \div 9$ $63 \div 7$ 8×9 9×8 $72 \div 9$ $72 \div 8$ $\frac{1}{9}$ of 54 $\frac{1}{9}$ of 63 $\frac{1}{9}$ of 72 $\frac{1}{9}$ of 81 $\frac{1}{9}$ of 90

Mental 74

- 1. Tom spent 18 cents for a kite and 6 cents for a ball. How much did he spend for both?
- 2. Helen wants to give 24 flowers to Our Lady. She has 6. How many more does Helen need?
- 3. One sled costs \$9.00. How much must Uncle Frank pay for 5 sleds?
- 4. What is the quotient when we divide 45 by 9?
- 5. Mother baked 54 pies. The children sold ¹/₉ of them. How many did they sell?

Drill 75

Add 8 to: 7, 17, 27, 39, 47, 67, 87, 55, 77, 97 Subtract 8 from: 15, 25, 36, 45, 67, 55, 85, 75 9×9 9×9 $81 \div 9$ $\frac{1}{9}$, of 81 10×9 9×10 $90 \div 9$ $\frac{1}{9}$ of 90 11×9 9×11 $99 \div 9$ $\frac{1}{9}$ of 99 12×9 9×12 $108 \div 9$ $\frac{1}{9}$ of 108 2)2 4 6 10 12 14 16 18

Mental 75

- 1. If 8 boys have ice skates, and 17 have roller skates, how many more have roller skates than ice skates?
- 2. The children are sledding down the hill. There are 25 large sleds and 8 small ones. How many sleds are there in all?
- 3. Each boy made 9 snowballs. How many boys made snowballs if there were 90 snowballs in all?
- 4. Harry saved \$.09 each day for 9 days. How much did he save in all?
- 5. ½ of 81 flyers are pilots. How many are pilots?

Drill 76

Add 7 to: 9, 19, 28, 39, 49, 69, 77, 99, 89 Subtract 7 from: 16, 26, 35, 46, 76, 55, 66, 86 $2\times9+3$ $4\times9+2$ $6\times9+5$ $8\times9+3$ $10\times9+6$ $9)\overline{18}$ $9)\overline{36}$ $9)\overline{54}$ $9)\overline{72}$ $9)\overline{90}$ $18\div9$ $36\div9$ $54\div9$ $72\div9$ $90\div9$ How many 2's? How many are over?

2)2 3 4 5 6 7 8 9 10 11

- 1. Jim saved \$.07 and Bob saved \$.19. How much did they both save? ____
- 2. Mary had \$.26. She spent \$.07 for candy. How much had she left?
- 3. 9 boys had perfect test papers. 3 times that many girls had perfect papers. _____ girls had perfect papers.
- 4. In 5 there are ____ 2's and ____ over.
- 5. If Tom has \$.87 in dimes and cents, he has ____ dimes and ___ cents.

Drill 77 Add 4 to: 8, 18, 27, 38, 68, 59, 48, 88, 78, 98

Subtract 4 from: 12, 22, 31, 62, 52, 42, 75, 82 $1 \times 9 + 3$ $3 \times 9 + 2$ $5 \times 9 + 4$ $7 \times 9 + 3$ $9 \times 9 + 4$ $9 \overline{)9}$ $9 \overline{)27}$ $9 \overline{)45}$ $9 \overline{)63}$ $9 \overline{)81}$ $9 \overline{)99}$ $9 \div 9$ $27 \div 9$ $45 \div 9$ $63 \div 9$ $81 \div 9$ $99 \div 9$ How many 2's? How many over?

2)3 5 7 9 11 13 15 17 19

Mental 77

- 1. Joan has \$.04. She wants a rosary that will cost \$.22. How much more money does she need?
- 2. Ray put \$.04 in the mission box. Mother put in \$.18. How much did they both give?
- 3. Each boy paid \$.09 for a ride on Tim's sled. How much did 7 boys pay?
- 4. In 9 there are ____ 2's and ____ over.
- 5. Dick has \$.75 in quarters. How many quarters has he? _____

Drill 78

Add 7 to: 5, 15, 26, 65, 45, 54, 35, 75, 95, 85 Subtract 7 from: 12, 22, 31, 42, 53, 82, 72, 62, 82

Multiply nine: 2's, 4's, 6's, 8's, 10's, 3's, 7's, 5's

How many 9's in: 18, 36, 54, 72, 90, 27 How many 2's? How many are over?

2)5 11 16 13 9 3 15 19

Mental 78

- 1. There were 9 boys in each row. How many boys were in 6 rows? _____
- 2. Ann had \$.22. She spent \$.07. How much had she left?
- 3. We had \$.15 in the mission box. The boys put in \$.07 more. How much was then in the box?
- 4. Billy has 5 cents. How many 2-cent taffies can he buy and how many cents will he have left?
- 5. Write the Roman number for 36. ____

Drill 79

Add 9 to: 3, 13, 22, 33, 63, 53, 43, 72, 93, 83 Subtract 9 from: 12, 22, 33, 42, 62, 52, 73, 82 1×10 2×10 3×10 4×10 5×10 10×1 10×2 10×3 10×4 10×5 How many 2's? How many are over?

2)5 9 17 15 19 7 3 13 11

Mental 79

- Mrs. Gay uses 10 quarts of milk each week. How many quarts will she use in 4 weeks?
- 2. Jack buys a medal for \$.03 and a picture for \$.09. How much money does he spend?
- 3. What change would you receive from \$.42 if you spent \$.09?
- 4. What is the remainder when we divide 15
- 5. Write in figures: Three dollars and twenty-seven cents.

Drill 80

Add 7 to: 4, 14, 25, 34, 64, 45, 74, 94, 84 Subtract 7 from: 11, 21, 31, 42, 61, 72, 81, 91

$3 \times 9 + 2 \\ 3 \times 8 + 2$	$3 \times 7 + 1 \\ 3 \times 4 + 2$	$3\times5+2$ $3\times2+2$	$3\times6+2$ $3\times3+1$
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							0.1	0.7	00
3)3	6	9	12	15	18	21	24	27	30

- 1. Dad had \$14.00 in the bank. He put in \$7.00 more. How much had he then in the bank?
- 2. In the parade there were 10 soldiers in a row. How many soldiers were in 6 rows?
- 3. Susan makes 10 valentines each day. In how many days will she make 30?
- 4. How many pens at \$.03 each can I buy for \$.18?
- 5. Write the Roman number for 39.

Drill 81 Add 8 to: 4, 14, 23, 34, 54, 43, 64, 84, 74, 94 Subtract 8 from: 12, 22, 32, 43, 52, 73, 62, 82 Multiply by 9 and add 3 to each product: 2, 4, 6, 8, 10, 3, 5, 7, 9, 0 How many 3's? How many are over? 3)4 5 7 8 10 11 13 14 16 17 19	Subtract 9 from: 14, 24, 34, 45, 54, 75, 64, 84 Multiply by 9 and then by 8: 0, 3, 5, 7, 9, 2, 4, 6, 8, 1 How many 3's? How many are over?
 At \$.10 each, how many tickets to the school fair can I buy for \$.70? Joseph has 14 cents. John has 8 cents. How much less has John than Joseph? When I multiply 7 by 10, the product is In 11 there are 3's and over. To find ½ of a number, we divide the number by 	2. Each girl made 7 valentines. How many valentines did 8 girls make?
Multiply by 9 and then by 10: 2, 4, 6, 8, 3, 5, 7, 9, 0, 1 How many 3's? How many are over?	Drill 84 Add 6 to: 9, 19, 28, 39, 59, 48, 69, 89, 79, 99 Subtract 6 from: 15, 25, 34, 45, 65, 74, 55, 85 Multiply by 8 and then by 7: 2, 4, 6, 8, 0, 3, 1, 5, 7, 9 How many 3's? How many are over? 3)4 10 13 19 23 5 14 11 17 8
parade. How many more marines than soldiers are there? Baby has 5 blocks. Billy has 18. How many blocks do they have together? What is the remainder when I divide 10	Mental 84 . Kay spends \$3.00 a week for lunch. How much does she spend in 7 weeks? How much change will Jack get from \$.25 if he buys a pencil for \$.06? At the Valentine party there were 24 boys. \$\frac{1}{8}\$ of them had paper hats. How many had paper hats? What is the remainder when we divide 19 by 3?

Add 7 to: 9, 19, 29, 38, 49, 59, 68, 78, 89, 98 Subtract 7 from: 16, 26, 36, 45, 55, 66, 76, 85 How many are over? How many 3's?

3)4	7 8	3 1	1 14	17	20	22	25	$\overline{28}$
4×	=	12	$4\times_{-}$	=	_	$^{4 imes}_{4 imes}$		= 24 = 8
4×	=3 4>	54 <	=20		4×_	=2	8	
4)4	8	12	16	20	24	28	32	36
4)12	20	4	24	8	36	16	32	28

Mental 85

- 1. There were 7 eggs in one nest and 9 in another. How many eggs were in the two nests? _
- 2. Larry saves \$.09 a week. How much will he save in 4 weeks? _
- 3. Rose had \$.16. She spent \$.07. How much had she left? _
- 4. Jim has 8 cents. He can buy ____ 3-cent taffies and have ____ cents over.
- 5. Write in figures, one dollar and twenty-five cents. _

Drill 86

Add 6 to: 9, 19, 29, 38, 49, 59, 67, 77, 89 Subtract 6 from: 15, 25, 34, 44, 55, 65, 73, 85 12 36 20 16 32 28 24 4)8 How many are over? How many 4's? $\overline{14}$ $\overline{13}$ 11 10 8 6 4)4

Mental 86

- 1. In 3 feet there is 1 yard. In 12 feet there are ____ yards.
- 2. Susan spent \$.05, \$.04, and \$.07. She spent _____ in all.
- 3. Tom's father had 15 boxes of cherries. He sold 9 of them. How many had he left? ___
- 4. Mollie has 4 dimes. For these dimes she can get ____ cents?
- 5. XLV = _____.

Drill 87

Add 7 to: 6, 16, 26, 35, 45, 56, 65, 76, 86 Subtract 6 from: 13, 23, 33, 53, 62, 73, 82

How many 3's? How many 2's? How many are over? 5, 7, 10, 13, 14, 11, 8, 17, 19

How many 4's? How many are over?

								-0.7
4)16	17	18	19	20	21	22	23	24

Mental 87

- Mary has 24 pieces of fudge to divide among her 4 girl friends. How many pieces does she give to each friend? ____
- 2. In 1 foot there are 12 inches. In 3 feet there are ____ inches.
- 3. \$.06 is how much less than \$.13? ____
- 4. What is the product of 8 times 4? ___
- 5. 1 gallon = ____ quarts.

23

4)21

Drill 88

Add 8 to: 7, 17, 27, 37, 46, 57, 66, 77, 86 Subtract 7 from: 15, 25, 35, 46, 56, 65, 74, 8 $\frac{1}{4}$ of: 16, 32, 4, 12, 36, 24, 8, 16, 28, 20 How many are over? How many 4's? 31 33 29 25 27

- 1. Kay has \$.07. How much more does sl need to buy a ball that will cost \$.15? ____
- 2. Bob rode 17 miles one day and 8 miles t next day. How many miles did he ride both days? .
- 3. How much must Mary Lou pay for 4 b tickets at \$.08 each? _
- 4. Father planted 20 rosebushes. 1/4 of the died. How many died? _
- 5. 2 pints = 1 quart. 6 pints = ____ quarts

ril		

Add 4 to: 9, 19, 29, 38, 48, 59, 68, 79, 89 Subtract 4 from: 13, 23, 32, 43, 52, 63, 72, 83 $4 \times 5 - 1$ $4 \times 7 - 2$ $4\times9-1$ $4 \times 8 - 3$ How many 4's? How many are over? 4)9 11 15 19 23 27 31 33

Mental 89

- 1. 7 days = 1 week. 28 days = ____ weeks. 2. 4:20 means ____ minutes past _
- 3. 4:40 means ____ minutes to
- 4. Write in figures: Five dollars and ten cents.
- 5. Whistles are 4 cents each. Ben has 23 cents. He can buy ____ whistles and have _ cents over.

Drill 90

Add 4 to: 9, 19, 28, 39, 47, 59, 66, 79, 99, 89 Subtract 4 from: 13, 23, 32, 43, 54, 63, 71, 83 5×4 5×2 5×3 5×8 9×5 5×7 5×9 5×6 7×5 4×5 5) 5 10 15 20 25 30 35 40 45 5)15 35 20 30 45 25 5 40 10

Mental 90

. Tom won 23 marbles on Monday. On Tuesday he won 4 less than this. How many did he win on Tuesday? _ . Betty paid \$.07 for each pencil. How much did she pay for 9 pencils? _ . Jim pays 30 cents for 5 pens. How much does each pen cost? _ 2,563 means _____ thousands, _ hundreds, _____ tens, ____ units. $\$.39 + \$.04 = \underline{\hspace{1cm}}$

Drill 91

Add 8 to: 6, 16, 25, 36, 44, 56, 65, 76, 96, 86 Subtract 8 from: 14, 24, 33, 44, 52, 64, 71, 94 $5 \times _{---} = 10$ $5 \times _{---} = 15$ $5 \times _{--} = 45$ $5 \times _{---} = 20$ $5 \times _{--} = 30$ $5 \times _{--} = 40$ $5 \times _{--} = 35$ $5 \times _{---} = 25$ 5)5 10 15 20 25 30 35 40 45 5)10 5 $\overline{20}$ 15 35 45 30 40 25 How many 5's? How many are over? 5)5 6 8 $\overline{9}$ 10 11 12 13 Mental 91 1. The sum of 16 and 8 is

- 2. Marie wrote 14 spelling words. 8 of them were correct. How many did she miss?
- 3. In Bob's room there are 45 boys in 5 rows. How many boys are in each row? ___
- 4. For 8 cents, Dick can buy _____ 5-cent candy bar and he will have ____ cents over.
- 5. What number comes after 6,235? _____

Drill 92

Add 7 to: 8, 18, 27, 38, 46, 58, 65, 78, 98, 88 Subtract 7 from: 15, 25, 34, 45, 53, 65, 72, 95 How many 2's in: 5, 7, 9, 11, 13, 15, 17, 19 How many 5's in: 10, 30, 25, 45, 5, 35, 15, 20 How many 5's? How many are over? 16 17

Mental 92

19

20

21

18

- 1. The difference between 25 and 7 is _ 2. Jack is 18 years old. How old will he be 7
- years from now? _ 3. How many 2-cent taffies can I buy for 17 cents? ____ How many cents will I have
- over? _ 4. In 14, there are ____ 3's and ____ over.
- 5. For 24 cents, Jim can buy ____ 5-cent tablets and have ____ cents over.

Add 8 to: 8, 18, 29, 38, 47, 58, 68, 78, 98, 88 Subtract 8 from: 16, 26, 37, 46, 59, 66, 78, 96 How many 3's in: 16, 17, 19, 21, 22, 23, 25, 26 How many 5's? How many are over?

5)25 26 27 28 29 30 31 32 33 34 35

Mental 93

- 1. Bill is 16 years old. How old was he 8 years ago?
- 2. On Monday Peter sold 18 papers. On Tuesday he sold 8 papers. How many did he sell on both days?
- 3. For 23 cents Jane can buy _____ 3-cent erasers, and have ____ cents over.
- 4. How many 4's are there in 17? _____ How many are over? ____
- 5. How many nickels are there in 26 cents?

 _____ How many cents are over? _____

Drill 94

Add 9 to: 8, 18, 29, 38, 47, 58, 66, 78, 98, 88 Subtract 9 from: 17, 27, 39, 47, 58, 67, 76, 97 How many 5's? How many are over?

5)30	31	34	35	38	39	40	44	45	47	48	49
5× 5× 5× 5×	:	= 40 = 25			_X	5 = 3 $5 = 4$ $5 = 1$ $5 = 5$.5 .5	5 9	×_ ×_	= = =	= 35 = 45

Mental 94

- Ed had 28 cents. Dick had 9 cents. How much less had Dick than Ed?
- 2. In 1 foot there are 12 inches. How many inches are there in 6 feet? _____
- 3. Anne picked 6 flowers. Ellen picked 7 times as many. How many flowers did Ellen pick? _____
- 4. How many 5-cent popcorn balls can be bought for 43 cents? How many cents will be over? ———
- 5. Write the Roman number for 45.

Drill 95

Add 9 to: 9, 19, 28, 47, 59, 66, 79, 99, 89, 38 Subtract 9 from: 18, 28, 39, 48, 57, 68, 76, 88 How many 5's? How many are over?

5)11	13	22	-17	36	19	43	32	29
6×3 6×7		6×9 6×2		8×4 8×1		$\begin{array}{c} \times 8 \\ \times 5 \end{array}$		$\times 6 \times 10$
6)6	12	18	24	30	36	42	48	$\overline{54}$
6)18	30	42	12	48	36	54	6	24

Mental 95

- 1. John has \$.09. He wants to buy a book that will cost \$.18. How much more money does he need? _____
- 2. What will Tom pay for six 9-cent balloons?
- 3. There are 54 eggs in 6 baskets. How many eggs are in each basket?
- 4. Candy chicks are 5 cents each. For 13 cents I can buy ____ and have ____ cents over.
- 5. XLVI means _____

Drill 96

Add 5 to: 9, 19, 28, 39, 47, 59, 66, 79, 85, 99 Subtract 5 from: 14, 24, 35, 44, 56, 64, 73, 84 $6 \times _{---} = 48$ $6 \times _{---} = 42$ $6 \times _{---} = 12$ $6 \times _{---} = 24$ $6 \times _{---} = 18$ $6 \times _{---} = 30$ $6 \times _{---} = 60$ $6 \times _{---} = 36$ $6 \times _{---} = 54$ How many 4's? How many 5's? How many are over? 24, 27, 33, 17, 22, 13, 37, 41 Divide by 6: 18, 30, 6, 42, 24, 56, 12, 36 How many are over? How many 6's?

6)6 7 8 9 10 11 12 13 14 15 16 17 18

- In our class there are 19 boys. There are 5 more than this number in the second grade. How many boys are in the second grade?
- 2. Ray has \$.24. John has \$.05 less than Ray. How much money has John?
- 3. Mary has 9 cents. How many 6-cent rings can she buy? ____ How much will she have over? ____
- 4. How many 5-cent rides on the pony can Larry take if he has 27 cents?
- 5. Write the Roman number for 39. ____

Add 4 to: 7, 17, 28, 37, 49, 57, 66, 77, 97, 87 Subtract 4 from: 11, 21, 32, 41, 53, 61, 74, 83 How many 2's? How many 3's? How many are over? 5, 3, 7, 11, 15, 9, 17, 13, 19, 21, 25, 29, 31

How many 6's? How many are over?

6)16 17 18 19 20 21 22 23 24 25 26 27 $3\times4+1$ $4\times7+3$ $6\times7+2$ $8\times7+5$ $7\times7+4$

Mental 97

- 1. Betty picked 4 daisies and 7 buttercups. How many flowers did she pick?
- 2. Paper flowers are 6 cents each. How many can Betty buy for 14 cents? ____ She will have ____ cents over.
- 3. In our class we have 21 boys. $\frac{1}{3}$ of them are in the school play. How many are in the play?
- 4. In 1 quart there are 2 pints. In 8 quarts there are ___ pints.
- 5. When the long hand of the clock is at 2, how many minutes past the hour is it? _____

Drill 98

Add 4 to: 8, 18, 29, 38, 47, 58, 66, 78, 88, 98 Subtract 4 from: 12, 22, 42, 54, 62, 71, 82, 92

 $\frac{1}{3}$ of: 6, 12, 21, 27, 9, 15, 24, 30, 3, 18

How many 3's? 4, 9, 21, 17, 14, 26, 35, 39, 11 How many 6's? How many are over?

6)36 37 38 39 40 41 42 43 44 45

Mental 98

- 1. John's boat is 18 inches long. Tom's boat is 4 inches longer than John's. How long is Tom's boat?
- 2. Mary's doll is 19 inches tall. Anna's doll is 4 inches taller than Mary's. How tall is Anna's doll?
- 3. If 13 cookies are divided among 6 boys, how many will each boy have? _____ How many will be over? _____
- In 1 yard there are 3 feet. In 6 yards there are _____ feet.
- 6. How many minutes past the hour is it when the long hand of the clock points to 4? ____

Drill 99

Add 8 to: 5, 15, 26, 35, 47, 55, 68, 75, 95, 85 Subtract 8 from: 13, 23, 32, 43, 54, 63, 75, 83

½ of: 8, 24, 36, 4, 12, 20, 28, 16, 32

How many 4's? 6, 10, 14, 21, 17, 15, 9, 26, 34 How many 6's? How many are over?

6)48 49 50 51 52 53 54 55 56 57 58

Mental 99

- 1. Bob's dog is 23 inches tall. Dick's pup is only 8 inches tall. How many inches taller than Dick's dog is Bob's?
- 2. Betty made 36 bookmarks. She gave Sister 4 of them. How many did Sister have?
- 3. Dad has 20 cents. He can give each of his 6 boys ____ cents. Dad will have ____ cents over.
- 4. There are 7 days in one week. In 6 weeks there are ____ days.
- 5. 3:25 means ___ minutes after ____.

Drill 100

Add 5 to: 9, 19, 28, 39, 47, 59, 66, 79, 99, 89 Subtract 5 from: 14, 24, 33, 44, 52, 64, 71, 94 16 of: 24, 42, 54, 18, 30, 48, 36, 6, 12, 60 How many 6's in: 8, 14, 20, 26, 32, 38, 44, 50 7×4 7×1 7×3 7×6 7×2 7×7 7×5 7×9 7×8 7×10 7)721 14 28 35 42 56 49 63 7)21 14 28 63 35 56 42 49

- Last year Jim had only 5 books. This year he has 14. How many new books has he?
- 2. When we divide, is our answer the remainder or the quotient?
- 3. In 26 there are ___ 6's and ___ over.
- 4. One foot = 12 inches. $5 \text{ feet} = \underline{\hspace{1cm}}$ inches.
- 5. Three boys picked 21 quarts of berries. Each boy picked ____ quarts.

$$7 \times \underline{\hspace{1cm}} = 14$$
 $7 \times \underline{\hspace{1cm}} = 42$ $7 \times \underline{\hspace{1cm}} = 49$ $7 \times \underline{\hspace{1cm}} = 63$ $7 \times \underline{\hspace{1cm}} = 35$

How many 7's? How many are over?

7)7 8 9 10 11 12 13 14 15 16

Mental 101

- 1. Susan read 9 stories last week and 6 this week. How many stories did she read?
- 2. How much change will Jerry receive from \$.25 if he buys a story book for \$.09?
- 3. To find the product, must we add or multi-
- 4. Pens are 7 cents each. Ellen has 16 cents. She can buy ____ pens and have____ cents
- 5. There are 4 quarts in 1 gallon. How many quarts are there in 9 gallons?

Drill 102

Add 7 to: 9, 19, 28, 39, 47, 59, 66, 79, 99, 89 Subtract 7 from: 16, 26, 35, 46, 54, 66, 73, 86 How many 6's? How many are over?

6)16	26	37	43	13	28	46	9
		28, 42,					
How How	many many	7's? 49 7's and	, 52, how	54, 3 many	7, 51, y are	43, 65, over?	26

7)49 50 51 52 53 56 57 58 59 60

Mental 102

- 1. \$.19 + \$.07 = \$.26. Which number is the sum?
- 2. In the Easter basket there were 16 eggs. Tommy gave 7 of them away. How many eggs were still in the basket? _____
- 3. $\frac{8}{7)56}$ Which number is the quotient? ____
- 4. Helen had \$.63. She spent \(\frac{1}{7} \) of her money. How much money did she spend?
- 5. Write the Roman number for 50.

Drill 103

Add 9 to: 8, 18, 27, 38, 46, 58, 65, 78, 98, 88

Subtract 9 from: 17, 27, 38, 47, 56, 67, 75, 87

How many 6's? How many 7's? How many are over? 37, 57, 16, 27, 46, 50, 11, 8

How many 8's? 8, 16, 24, 32, 40, 48, 56, 64, 72 $\frac{1}{8}$ of: 16, 48, 24, 40, 32, 8, 64, 72, 56

Mental 103

- 1. Father drove 18 miles in the morning and 9 miles in the afternoon. How many miles did he drive?
- 2. The Cubs walked 17 miles. The Brownies walked only 9 miles. How many miles less than the Cubs did the Brownies walk?
- 3. In 22 there are three 7's and 1 over. Do we call 1 the quotient or the remainder?
- 4. What is the largest number you can have for a remainder when you divide by 7? _____
- 5. The Roman number for 46 is _____

Drill 104

7+3+6 9+4+7 7+8+5 8+4+5

Divide by 8: 32, 48, 16, 40, 80, 56, 72, 8, 64, 24

 $\frac{1}{8}$ of: 16, 40, 64, 8, 48, 72, 24, 56, 32, 80

 $\frac{1}{7}$ of: 42, 21, 7, 35, 70, 56, 14, 63, 28, 49 $\frac{1}{6}$ of: 24, 36, 18, 30, 6, 42, 54, 12, 48, 60

How many 8's? How many are over?

8) 9 10 12 14 11 13 15 17

- 1. What is the sum of \$.15 and \$.08? _
- 2. 3 feet = 1 yard. 6 feet = ____ yards.
- 3. 4,306 means ____ thousands, ___ hundreds, ___ tens, ___ units.
- 4. 7 days = 1 week. 21 days = ____ weeks.
- 5. Larry bought 40 lemon drops. He gave \(\frac{1}{8} \) of them to Billy. How many did he give to Billy?

UNIT FIFTEEN:

WORK FOR BUSY BEES

1 ADDITION AND SUBTRACTION

The work on these pages is practice to help you make progress in arithmetic. You may do the examples over and over. Try hard if you want to be a star.

	KI ICAR CARON		77 THE 18							
Add:	~~		0.4	0.	20	0.4	0.0	10		i zeni
Row 1	25 32	43 35	31	$\begin{array}{r} 27 \\ 52 \\ \hline \end{array}$	63 26	34 54	$\begin{array}{r} 32 \\ 16 \end{array}$	$\begin{array}{c} 13 \\ 14 \\ \hline \end{array}$	$\begin{array}{c} 22 \\ 24 \\ \hline \end{array}$	45 14
Row 2	51 52	62 45	53 63	$\begin{array}{c} 72 \\ 42 \\ \hline \end{array}$	90 35	82 44	76 51	63 65	46 93	72 67
Row 3	19 22	29 22	39 22	49	59 22	69 22	79 22	89 22	99 22	82 29
Row 4	17 35	27 35	37 35	47 35	57 35	67 35	77 35	87 35	97 35	65 37
Row 5	16 47	26 47	36 47	46 47	56 47	66 47	76 47	86 47	96 47	47 47
Row 6	19 52	27 45	36 37	28 43	39 53	45 68	48 84	54 69	77 37	86 35
Subtract:										
Row 7	49 27	58 16	77 35	36 14	94 72	83 52	59 32	96 62	$\begin{array}{c} 47 \\ 25 \\ \end{array}$	68 44
Row 8	95 40	86 50	77 27	68 38	59 10	$\begin{array}{c} 44 \\ 20 \\ \hline \end{array}$	35 15	26 6	57 16	68 35
Row 9	17 15	27 15	37 15	47 15	57 15	67 15	77 15	87 15	97 15	47 25
Row 10	19 16	29 16	39 16	49 16	59 16	69 16	79 16	89 16	99 16	39 15
Row 11	21 19	31 19	41 19	51 19	61 19	71 19	81 19	91 19	31 12	$ \begin{array}{c} 71 \\ 12 \\ \end{array} $
Row 12	22 18	32 18	42 18	52 18	62 18	72 18	82 18	92 18	52 28	82 28

2 ADDITI	ON AN	ID SUB	TRACTION	(CONTIN	UED)				
Add: Row 1	24 36	15 27	32 12	3	43 24	18 33	13 43	1	29 15
•	$\frac{22}{2}$	$\frac{\overline{42}}{}$	$\frac{45}{}$	2	12	<u>35</u>	$\frac{24}{2}$		<u>54</u>
Row 2	$\begin{array}{c} 4 \\ 63 \\ \underline{54} \end{array}$	19 50 <u>75</u>	26 4 3		74 7 62	89 46 31	56 71 8		97 60 <u>6</u>
Row 3	24 36 32 44	$ \begin{array}{r} 47 \\ 80 \\ 8 \\ \underline{23} \\ \end{array} $	89 4 30 <u>56</u>		$ \begin{array}{r} 27 \\ 91 \\ 6 \\ \hline 34 \\ \hline \end{array} $	56 43 20 <u>9</u>	38 7 20 52)	60 29 41 8
Row 4	730 647 303	537 645 720	604 520 419	4	60 08 49	825 701 45	978 206 150	5	720 609 58
Row 5 \$	67.40 2.10 6.15	\$5.34 4.05 3.60	\$8.15 4.20 3.60		60 10 08	\$5.40 3.05 2.13	\$6.20 5.34 2.05	Ł	\$4.15 2.03 6.70
	89.82 6.09 5.10	\$3.54 2.16 8.03	4.03		18 05 24	\$7.19 2.03 5.40	\$2.50 6.04 3.18	Į	\$4.70 2.15 1.08
_	\$6.25 5.90 3.59	\$8.46 3.75 2.60	5.95		.80 .04 .29	\$9.67 1.34 2.50	\$8.44 2.38 3.60	3	\$9.85 3.10 1.67
Subtract: Row 8	41	63 9	95 84	92	67	56	78	83	95
			78 79	85	<u>58</u>	<u>47</u>	<u>19</u>	$\frac{24}{}$	38
		60 16	10 80 17 28	30 <u>6</u>	$\frac{50}{12}$	70 23	$\frac{90}{31}$	$\frac{20}{4}$	$\frac{60}{9}$
	55 18	73 8 28 2	36 22 <u>15</u>	50 16	92 <u>36</u>	$\frac{68}{41}$	$\frac{40}{8}$	67 38 —	$\frac{70}{12}$
Row 11	531 17	732 16		-	275 49	526 18	367 38		$\begin{array}{r} 465 \\ \underline{48} \end{array}$
Row 12	462	584 326	973 459		395 178	694 305	763 259		941 128

				-	
3	MORE	WORK	FOR	BUSY	BEES

Subtract:	358	239	627	518		721 456	385
Row 1	167	54	243	133		350 70	190
Row 2	427 189	614 478	635 367	546 297	634 456	123 79 84	576 388
Row 3	\$6.25 1.58	\$7.64 2.96	\$4.72 3.95	\$5.43 2.79	\$8.37 1.58		\$6.34 3.89
Row 4	$\frac{400}{274}$	600 493	900 535	300 146	500 182	800 629	700 411
Row 5	\$3.00	\$5.00	\$8.00	\$7.00	\$9.00	\$6.00	\$4.00
	1.52	2.39	3.65	4.97	6.74	2.81	1.26
Row 6	\$7.00 .56	\$9.00	\$6.00 	\$3.00 .82	\$8.00 .75	\$5.00 .61	\$4.00 .14
Row 7	603	504	307	802	405	906	708
	291	243	165	412	172	354	425
Row 8	\$4.03	\$7.01	\$6.04	\$9.02	\$5.04	\$8.05	\$3.02
	1.18	3.67	4.76	2.85	2.25	4.39	1.97
Row 9	701	908	405	807	304	702	506
	672	829	337	719	296	693	498
Row 10	\$6.03	\$9.05	\$4.02	\$8.01	\$7.04	\$5.04	\$3.01
	5.34	8.98	3.47	7.68	6.85	4.76	2.54
Row 11	723	685	451	946	874	592	367
	714	679	447	938	866	585	359
Row 12	\$2.17	\$4.76	\$3.58	\$6.45	\$9.23	\$8.34	\$5.62
	2.09	4.68	3.49	6.38	9.17	8.26	5.54
Row 13	\$6.13 .49	\$3.05 74	\$7.64 .58	\$9.38 .89	\$4.00	\$6.00	\$3.04 .23

MULTIPLICATION

4 MULII	PLICATIO	N				1400 O-0		10
Row 1	$\frac{24}{2}$	$\frac{43}{2}$	$\frac{14}{2}$	$\frac{22}{3}$	$\frac{31}{3}$	$\begin{array}{c} 23 \\ \underline{2} \end{array}$	$\frac{32}{3}$	$\frac{12}{2}$
Row 2	$\begin{array}{c} 21 \\ \underline{5} \end{array}$	31 <u>4</u>	$\frac{62}{2}$	$\begin{array}{c} 73 \\ \underline{2} \\ - \end{array}$	$\frac{82}{3}$	$\frac{91}{2}$	$\frac{50}{3}$	$\frac{61}{3}$
Row 3	20 2	$\frac{30}{2}$	$\frac{40}{2}$	$\frac{50}{2}$	$\frac{60}{2}$	$\frac{20}{3}$	$\frac{30}{3}$	$\frac{40}{3}$
Carrying: Row 4	24 _3 	$\begin{array}{c} 36 \\ \underline{2} \end{array}$	24 _4 	$\begin{array}{c} 35 \\ \underline{2} \\ - \end{array}$	26 <u>3</u>	$\frac{46}{2}$	$\frac{17}{2}$	$\frac{27}{2}$
Row 5	$\begin{array}{c} 48 \\ 3 \\ - \end{array}$	58 3	38	$\frac{68}{3}$	$\frac{66}{2}$	$\frac{76}{2}$	$\frac{86}{2}$	$\frac{96}{2}$
Row 6	25 5	35 5	$\begin{array}{c} 45 \\ \underline{4} \\ - \end{array}$	$\frac{55}{4}$	25 6	$\begin{array}{c} 35 \\ \underline{-6} \end{array}$	$\begin{array}{c} 45 \\ \underline{6} \\ -\overline{} \end{array}$	$\begin{array}{c} 62 \\ \underline{6} \end{array}$
Row 7	$\begin{array}{c} 16 \\ 7 \\ - \end{array}$	35 _7	42 7	$\frac{94}{7}$	86 _7 	78 <u>7</u>	84 <u>8</u>	76 8
Row 8	35 _8 	92 	19 <u>8</u>	$\frac{62}{9}$	78 <u>9</u>	93 <u>9</u>	$\frac{54}{9}$	79 <u>9</u>
NT	~ 4							
No carryin Row 9	421 	$\begin{array}{c} 124 \\ \underline{} \\ \underline{} \end{array}$	$\frac{214}{2}$		$\frac{123}{3}$	213 3	312 3	$\begin{array}{c} 411 \\ \underline{} \\ \underline{} \end{array}$
Row 10	321 4	$\frac{423}{3}$	$\begin{array}{c} 211 \\ \phantom{00000000000000000000000000000000000$		311 6	522 	$\frac{612}{4}$	$\frac{712}{3}$
Carrying f	rom units	column:						
Row 11	125 3	316	$\begin{array}{c} 417 \\ \phantom{00000000000000000000000000000000000$		$\begin{array}{c} 538 \\ \underline{2} \\ -\underline{} \end{array}$	$\frac{229}{2}$	$\frac{418}{3}$	$\begin{array}{c} 239 \\ \underline{} \\ -\underline{} \end{array}$
Row 12	206	408	$\frac{507}{3}$		609 	$\frac{708}{3}$	$\frac{506}{4}$	$\frac{808}{4}$
Row 13	904	807 	$\begin{array}{c} 405 \\ \phantom{00000000000000000000000000000000000$		603 	706 	304 	$\begin{array}{r} 809 \\ \phantom{00000000000000000000000000000000000$
Row 14	\$6.08 5	\$2.05 5	\$3.07 6		\$6.08 6	\$5.04 6	\$9.06 6	\$8.09

5 MORE WORK FOR BUSY BEES

Work these in your copybook.

			copyouth
Carrying	from	tens'	column:

g from ter	rs' colum	n:					
620 ×6	540 ×6	730		950 ×6	790 ×6		580 ×6
183 ×2	362 ×2			892 ×4	541 ×4	_	
from un	its' and	tene' and	010000		1		
$\times 3$	<u>×3</u>	×3	×3	$\begin{array}{c} 834 \\ \times 4 \end{array}$	$\begin{array}{c} 765 \\ \times 4 \end{array}$	926 ×4	375×4
639 ×5	478 ×5	$\begin{array}{c} 364 \\ \times 5 \end{array}$	925 ×5	793 ×6	846 ×6	519 ×6	627 ×6
438 ×6	927 ×7	165 ×7	638 ×6	729 ×7	546 ×6	847 ×7	745 ×7
934 ×7	152 ×8	324 ×8	576 ×8	918 ×8	825 ×9	643	254 ×9
719 ×9	498 ×9	546 ×8	917 ×8	415 ×9	648 ×9	376	386 ×9
\$1.64 <u>×6</u>	\$1.87 ×6	\$8.92 ×6	\$4.45 ×6	\$5.35 ×7	\$6.28	\$9.74	\$8.69 ×7
sians.							
\$1.47 +3.68			\$2.48 ×6	\$6.75 -6.69			$$2.04 \\ -1.96$
$\frac{$4.00}{-3.98}$			\$7.19 ×5	$$4.56 \\ -2.95$			\$6.90 +3.06
$\frac{\$9.05}{-2.68}$	\$6. -6.	43 39	$\$4.15 \\ +2.98$	\$3.24 ×5	\$6.	08	\$4.04 -2.19
$\frac{$6.00}{-3.06}$			\$4.59 ×8	\$3.06 ×7	\$5.	07	\$4.18 -4.09
$$9.00 \\ -2.04$			\$6.38 +4.07	\$7.18 ×8	\$6.0	05	\$2.49 ×8
	$ \begin{array}{r} 620 \\ \times 6 \\ \hline 183 \\ \times 2 \\ \hline 183 \\ \times 3 \\ \hline 639 \\ \times 5 \\ \hline 438 \\ \times 6 \\ \hline 934 \\ \times 7 \\ \hline 719 \\ \times 9 \\ \hline $1.64 \\ \times 6 \\ \hline $9.9 \\ $1.64 \\ \times 6 \\ \hline $1.47 \\ +3.68 \\ \hline $4.00 \\ -3.98 \\ \hline $9.05 \\ -2.68 \\ \hline $6.00 \\ -3.06 \\ \hline $9.00 \\ \hline $9.00 \\ \hline $9.00 \\ \hline } $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	620 540 730 870 950 790 960 X6 X6 X6 X6 X6 X6 X6 X6 183 362 473 642 892 541 672 X2 X2 X3 X3 X4 X4 X4 4 X4 X4 X4 X4 X4 4 X4 685 947 759 834 765 926 X3 X3 X3 X3 X4 X4 X4 639 478 364 925 793 846 519 X5 X5 X5 X5 X6 X6 X6 X6 438 927 165 638 729 546 847 X7 934 152 324 576 918 825 643 X7 X8 X8 X8 X9 X9 \$1.64 \$1.87

6 DIVISION

Row 1	2)8	2)4	2)18	2)10	2)2	2)14	2)6	2)16
Row 2	2)20	2)12	3)3	3)9	3)15	3)18	3)27	3)21
Row 3	3)30	3)12	3)6	3)24	4)4	4)12	4)20	4)28
Row 4	4)36	4)16	4)24	4)32	$4\overline{)40}$	4)8	5)10	5)20
Row 5	5)5	5)15	5)40	5)25	5)35	5)30	5)45	5)50
Row 6	6)6	6)42	6)18	6)30	6)24	6)48	6)60	6)54
Row 7	6)12	6)36	7)7	7)21	7)49	7)35	7)63	7)56
Row 8	7)70	7)42	7)14	7)28	8)8	8)32	8)48	8)16
Row 9	8)72	8)40	8)64	8)80	8)56	8)24	9)9	9)45
Row 10	9)90	9)72	9)18	9)63	9)81	9)27	9)54	9)36
Row 11	1)3	1)7	1)8	1)4	1)6	1)9	1)2	1)1
		3)30	4)40	5)50	6)60	2)24	3)36	4)48
Row 12		5)55	4)44	6)66	8)80	8)88	9)99	9)90
Row 13		2)46	2)82	2)42	3)69	3)39	3)60	3)90
Row 14		2)148	2)164	3)186	3)153	3)123	3)213	3)246
Row 15		4)168	$4)\overline{248}$	$4)\overline{284}$	5)155	6)186	6)126	$7)\overline{147}$
⁹ Row 16			3)963	3)639	3)396	4)848	4)484	$4)\overline{884}$
Row 17			2)604	3)906		4)840	5)550	6)660
Row 18							7)700	8)880
Row 19			3)900	4)400				
Row 20	5)255	6)426	7)217	8)168	8)328	9)009	0,010	-/-



MORE WORK FOR BUSY BEES

Do these in your copybooks.

Find the sums:

r ina ine	sums:					
Row 1	3 4 2 5	4 3 5 6 4 7 3 2	3 5 3 6 —	5 6 3 4 7 5 1 3		5 3 7 6 4 5 2 4
Row 2	34 26 13 <u>45</u>	10 53 47 <u>24</u>	83 9 6 35 18 60 50 73	8 76	7 40 58 5	68 25 4 6 30 8 16 91
Row 3	201 373 145 232	405 518 196 350	300 215 70 968	654 219 300 475	743 87 475 700	549 265 106 18
Row 4	\$6.48 2.16 4.00 7.34	\$5.20 .87 7.05 3.02	\$4.67 3.24 .80 .79	\$9.50 .47 .16 3.28	\$8.16 4.39 6.04 2.00	\$1.45 .08 5.00 3.17
Row 5	\$3.09 .58 .03 4.66	\$2.18 4.47 .06 3.01	\$9.14 3.00 2.75 .16	\$7.35 2.04 5.60 8.44	\$8.26 .40 .37 .68	\$6.00 1.09 .18 9.35
Row 6	½ of 12,	½ of 28,	½ of 32,	¹ / ₄ of 20,	½ of 36,	½ of 24
Row 7	$\frac{1}{5}$ of 20,	$\frac{1}{5}$ of 40,	$\frac{1}{5}$ of 50,	$\frac{1}{5}$ of 25,	$\frac{1}{5}$ of 45,	½ of 35
Row 8	$\frac{1}{6}$ of 6,	$\frac{1}{6}$ of 36,	$\frac{1}{6}$ of 48,	¹ / ₆ of 42,	½ of 24,	¹ / ₆ of 54
low 9	½ of 14,	$\frac{1}{7}$ of 56,	½ of 35,	$\frac{1}{7}$ of 63,	$\frac{1}{7}$ of 42,	½ of 70
					½ of 48,	
low 11	¹ / ₉ of 18,	$\frac{1}{9}$ of 45,	$\frac{1}{9}$ of 72,	$\frac{1}{9}$ of 63,	½ of 90,	½ of 9

8 DIVISION WITH REMAINDERS

Work these in your copybook:

Row 1	4)9	4)10	4)13	4)17	4)15	4)19	4)22	$4)\overline{25}$
Row 2	4)27	4)31	4)35	4)30	4)37	4)34	4)39	4)29
Row 3	4)33	4)38	5)7	5)9	5)12	5)13	5)14	5)11
Row 4	5)17	5)19	5)21	5)23	5)26	5)29	5)32	5)34
Row 5	5)38	5)39	5)42	5)44	5)49	5)46	6)9	6)14
Row 6	6)20	6)23	6)17	6)27	6)29	6)32	6)34	6)37
Row 7	6)41	6)43	6)47	6)44	6)49	6)51	6)55	6)59
Row 8	6)57	6)52	7)9	7)11	7)13	7)12	7)10	7)15
Row 9	7)17	7)19	7)20	7)24	7)26	7)20	7)30	$7)\overline{27}$
Row 10	3)74	3)82	3)53	3)44	3)85	3)76	3)83	3)58
Row 11	- 4 <u>)61</u>	4)74	4)95	4)53	$4\overline{)97}$	4)67	4)55	4)73
Row 12	5)96	5)72	5)84	5)76	5)93	5)87	5)74	5)68
Row 13	6)83	6)74	6)97	6)75	6)85	6)93	6)76	6)95
Row 14	7)82	7)96	7)94	7)99	8)92	8)95	8)97	8)99
Row 15	3)137	3)143	3)175	3)196	3)206	3)256	3)289	3)295
Row 16	4)182	$4)\overline{179}$	$4)\overline{239}$	$4\overline{)278}$	$4\overline{)305}$	$4)\overline{317}$	$4\overline{)346}$	4)385
Row 17	5)116	5)124	5)171	5)236	5)329	5)391	5)387	5)426
Row 18		6)135	6)257	$6\overline{)262}$	6)207	6)398	6)298	6)418
Row 19		7)114	7)139	7)159	7)239	$7)\overline{242}$	7)316	7)470

9 MORE WORK FOR BUSY BEES

Write in figures:

two thousand eight one thousand twelve three thousand seventeen four thousand nine six thousand eleven eight thousand nineteen nine thousand fifteen

One dollar and five cents Three dollars and seven cents Nine dollars and three cents Eight dollars and one cent Two dollars and nine cents Six dollars and two cents Four dollars and eight cents No dollars and four cents Five dollars and six cents Seven dollars and no cents

Write in figures:

twelve thousand four hundred seventy-nine eighteen thousand three hundred thirty-six seventeen thousand two hundred sixty-five nineteen thousand six hundred eighty-four twenty-seven thousand four hundred three thirty-six thousand six hundred two forty-five thousand three hundred seven

Five dollars and sixty-two cents Eight dollars and seventy-five cents Nine dollars and fifteen cents No dollars and eighty-one cents One dollar and seventeen cents No dollars and twenty-four cents No dollars and nineteen cents Three dollars and thirteen cents Seven dollars and ninety cents Four dollars and forty-six cents

Write in Arabic numbers:

[IX	XIII	XXVI	XXXIV	XL	XLIV
V	VIII	XVIII	XXIV	XXXV	L	XLVI
K	XI	XIX	XXVII	XXXIII	XLVII	XLVIII
V	XV	XX	XXIII	XXXVI	XLV	XLIX
/I	XIV	XXI	XXIX	XXXIX	XLI	XLII
/II	XVI	XXV	XXX	XXXVIII	XLIII	LI

Vrite in Roman numbers:

10,	15,	25,	35,	4,	14,	24,	34,	44,	50
16,	26,	36,	46,	3,	13,	23,	33,	43,	30
19,	29,	39,	49,	7,	17,	27,	37,	47.	40
12,	22,	32,	42,	8,	18,	28,	38,	48,	20

10 HOW WELL DO YOU REMEMBER?

Change to ounces: 1 lb., 3 lb., 6 lb., 5 lb., 2 lb., 4 lb.

How many ounces in $\frac{1}{2}$ lb., $\frac{1}{4}$ lb., $\frac{1}{8}$ lb.?

Change to pints: 1 qt., 3 qt., 5 qt., 6 qt., 8 qt., 4 qt.

Change to quarts: 2 pt., 16 pt., 10 pt., 8 pt., 6 pt., 12 pt.

Change to quarts: 1 gal., 4 gal., 5 gal., 3 gal., 6 gal., 2 gal.

Change to gallons: 16 qt., 12 qt., 4 qt., 20 qt., 8 qt., 28 qt.

Change to inches: 1 ft., 3 ft., 5 ft., 2 ft., 4 ft., 6 ft.

Change to feet: 1 yd., 4 yd., 8 yd., 3 yd., 2 yd., 5 yd.

Change to yards: 3 ft., 6 ft., 12 ft., 21 ft., 9 ft., 24 ft.

Change to days: 1 wk., 3 wk., 6 wk., 2 wk., 5 wk., 7 wk.

Change to weeks: 7 da., 28 da., 14 da., 35 da., 21 da., 42 da.

Change to months: 1 yr., 3 yr., 5 yr., 7 yr., 9 yr., 4 yr.

How many cents in 3 nickels? in 3 dimes? in 10 dimes? in 7 nickels? in 1 quarter? in 4 quarters? in a quarter and a nickel? in a quarter and a dime? in a half dollar? in a dollar?

How many things in 1 dozen, 3 doz., $\frac{1}{4}$ doz., $\frac{1}{6}$ doz., $\frac{1}{2}$ doz.?

$\begin{array}{c} 1234 \\ \times 2 \end{array}$	$\begin{array}{c} 4231 \\ \times 3 \end{array}$	$\begin{array}{c} 5302 \\ \times 3 \end{array}$	$\frac{6101}{\times 6}$	3201 <u>×4</u>
2214	3015	4106	$\begin{array}{c} 7118 \\ \times 4 \end{array}$	610ξ
×3	×5	×6		
\$10.35	\$12.47	\$21.19	$\$30.25 \\ \times 2$	\$42.10
×5	×3	<u>×4</u>		

PROGRESS TESTS

1 COMPUTATION TESTS

Here are some tests to try your skill in numbers. Each perfect score is a home run for you. How many home runs can you make? Have your papers look like the first two tests. Do all your work neatly.

	the libe two tests.	Do all your work neatly.
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

		100
Test 10 80 65 93 -16 -27 -38	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccc} & \text{Test } 16 \\ 104 & 303 & 505 \\ \times 7 & \times 8 & \times 6 \end{array} $
$ \begin{array}{ccc} 87\phi & 83\phi \\ +4\phi & +9\phi \end{array} $	$ \begin{array}{ccc} 39 & 53 \\ -26 & -18 \end{array} $	$\begin{array}{ccc} 235 & 416 & 26 \\ \times 7 & \times 2 & \times 8 \end{array}$
$\begin{array}{ccc} 23 & 15 & 36 \\ \times 7 & \times 7 & \times 7 \end{array}$	$\begin{array}{ccc} 251 & 340 & 532 \\ \times 7 & \times 6 & \times 4 \end{array}$	$ \begin{array}{rr} 47 & 55 \\ -18 & -39 \end{array} $
$7\overline{)21}$ $7\overline{)35}$	$6\overline{)54}$ $9\overline{)54}$	8)48 8)16
Test 11 75 67 90 -23 -18 -36	$ \begin{array}{ccc} & & & & & \\ & 162 & & & & & \\ & \times 6 & & \times 7 & & \times 7 \end{array} $	$ \begin{array}{ccc} & \text{Test } 17 \\ \hline 708 & 609 & 304 \\ \hline \times 6 & \times 7 & \times 8 \end{array} $
$ \begin{array}{ccc} 45e & 26e \\ +38e & +54e \end{array} $	$\begin{array}{rr} 275 & 346 \\ +308 & +128 \end{array}$	$\begin{array}{ccccc} 725 & 437 & 273 \\ +194 & +281 & +584 \end{array}$
$\begin{array}{ccc} 423 & 312 & 513 \\ \times 2 & \times 3 & \times 3 \end{array}$	$\begin{array}{cccc} 86 & 70 & 95 \\ -24 & -18 & -27 \end{array}$	$ \begin{array}{ccc} 90 & 66 \\ -38 & -40 \end{array} $
$7\overline{)42}$ $7\overline{)28}$	½ of 56 ½ of 42	½ of 32 ½ of 64
$\begin{array}{cccc} & & & & & & & & & & & & & & & & & $	$ \begin{array}{cccc} & & & & & & \\ & & & & & & & \\ & & & &$	Test 18 347 478 689 +395 +875 +375
$ \begin{array}{ccc} 36 & 47 \\ 4 & 16 \\ \underline{15} & 3 \end{array} $	87 78 +95 +56	$\begin{array}{c cccc} 608 & 321 & 145 \\ \times 8 & \times 7 & \times 8 \end{array}$
$\begin{array}{ccc} 126 & 327 & 425 \\ \times 2 & \times 3 & \times 3 \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccc} $
$7\overline{)63}$ $7\overline{)49}$	7)35 8)32	½ of 63 ½ of 72

	T	
Test 19	Test 22	Test 25
\$3.35 +1.20 \$.47 \$.25 19 \$.25 \$.25 07	24 12 45 20 34 13 45 9 30 13 10 18	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
240	$4\overline{)88}$ $3\overline{)63}$ $2\overline{)82}$	1.70
$ \begin{array}{ccccccccccccccccccccccccccccccccc$	9×9 3×9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
27 ÷9 36 ÷9	½ of 81 ½ of 27	90 ÷10 70 ÷10
Test 20	Test 23	Test 26
\$.73 \$.82 \$1.50 46 05 17	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	\$.06 ×9 *8 \$.60 ×7
$\begin{array}{ccc} \$4.05 & \$6.09 \\ +.20 & +.35 \end{array}$	\$6.35 \$7.33 \$5.25 180819	$2\overline{)5}$ $2\overline{)9}$
6×9 8×9 4×9	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$3)7 3)11 \frac{1}{8} of 32$
9)45 9)63	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	½ of 56 ½ of 63
Test 21	Test 24	Test · 27
2)42 3)96 4)84	443 571 423 -85 -95 -179	$2\overline{)17}$ $2\overline{)19}$ $3\overline{)16}$
\$.25	\$7.21 \$3.84 \$1.75 938697	$3\overline{)23}$ $4\overline{)23}$ $4\overline{)34}$
$\begin{array}{ccc} 108 & 213 & 340 \\ \times 9 & \times 9 & \times 9 \end{array}$	$\begin{array}{ccc} 312 & 423 \\ \times 7 & \times 9 \end{array}$	\$2.96 ×9 -1.96 \$4.58
½ of 54 ½ of 63	XXXV= 29=	+6.52 $5)55$

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{r} $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Test 29 $6)\overline{14} 6)\overline{56} 7)\overline{38}$ $\begin{array}{rrrr} \$6.00 & \$5.00 \\ +2.94 & -2.73 \end{array}$ $4)\overline{23} 5)\overline{17} 6)\overline{25}$ $\begin{array}{rrrr} 800 & 700 \\ -253 & -490 \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Test 30 $6\overline{)26} \qquad 7\overline{)36} \qquad 3\overline{)19}$ $7\overline{)44} \qquad 5\overline{)32}$ $6\overline{)56} \qquad 4\overline{)18} \qquad 7\overline{)66}$ $4\overline{)35} \qquad 5\overline{)47}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Test 36 $2)\overline{77} \qquad 2)\overline{96} \qquad 3)\overline{85}$ $3)\overline{57} \qquad 4)\overline{53}$ $4)\overline{97} \qquad 5)\overline{75} \qquad 6)\overline{87}$ $\begin{array}{c} \$7.50 \\09 \\ \hline \end{array} \qquad \begin{array}{c} \$4.06 \\ \times 9 \\ \hline \end{array}$

2.

PROBLEM TESTS

Test 1

- 1. Jane spent 13 cents for candy and 25 cents for rides on the merry-go-round. How much did she spend in all?
- 2. Rose had 18 cents in her bank. She spent 5 cents. How many cents had she left?
- 3. James earned 15 cents one week and 13 cents the next week. How much did he earn in the two weeks?
- 4. Billy had 58 marbles. He lost 23 of them. How many had he left?
- 5. Mollie has 18 dolls. Sally has 11 dolls. How many dolls do they both have?

Test 2

- 1. Paul weighs 45 pounds. His little sister, May, weighs 34 pounds. How much do they both weigh?
- 2. Ned brought 27 prizes for the party. The boys won 13 of them and the girls won the rest. How many did the girls win?
- 3. Jane has 52 green stars and 34 gold ones. How many stars has Jane altogether?
- 4. Tom had 23 cents and his father gave him 16 cents. How many cents had he then?
- 5. Betty had 25 gum drops. She gave 13 of them to Alice. How many had she left?

Test 3

- 1. Candy toys are 13 cents each. How much will Jack have to pay for 2 of them?
- 2. How many candy sticks at 2 cents each can Leo buy for 14 cents?
- 3. Rob bought 2 giant pops at 14 cents each. How much did he pay for them?
- 4. How many 3-cent taffies can Jack buy for 18 cents?
- 5. Ben had 18 gum drops. He ate $\frac{1}{3}$ of them. How many did he eat?

Test 4

- 1. Ann had 51 cents in her bank. She took out 11 cents. How many cents had she still in the bank?
- 2. Fred had 42 cents. His father gave him 19 cents. How many cents had he then?
- 3. Jim had 25 cents. He bought candy for 10 cents. How much had he left?
- 4. Mother bought meat for 35 cents, and cookies for 18 cents. How much did she spend?
- 5. May is 45 inches tall. Jack is 58 inches tall. How much taller than May is Jack?

Test 5

- 1. Mary Lou had 18 cherries. She gave \(\frac{1}{3} \) of them to her sister Jean. How many did she give to Jean?
- 2. Tony bought 3 bags of peanuts at 13 cents a bag. How much did they cost?
- 3. Mother divided 24 orange slices among the three children. How many did she give to each child?
- 4. On Sister's desk there are 2 boxes of pencils. In each box there are 14 pencils. How many pencils are there altogether?
- 5. Write the number one hundred five.

- 1. One game costs 13 cents. How much will 3 games cost?
- 2. Mother paid 24 cents for 3 cupcakes. How much did each cupcake cost?
- 3. Mr. Brown had 47 cows in one field, and 16 in another field. How many cows did he have?
- 4. Tom picked 38 apples. He gave away 24 of them. How many apples were left?
- 5. Farmer Brown had 27 turkeys. He sold $\frac{1}{3}$ of them. How many did he sell?

Test 7

- 1. Jim is 47 inches tall. George is 34 inches tall. How much taller than George is Jim?
- 2. Alice bought a jar of cookies for 35 cents and a box of crackers for 19 cents. How much did she pay for both?
- 3. David and Bobby are saving to buy a present for Father's birthday. David has 56 cents. Bobby has 37 cents. How much do they both have?
- 4. Carol has 38 inches of ribbon. She uses 15 inches for a bow for her doll. How much ribbon does Carol have left?
- 5. Write three hundred fifty in figures.

Test 8

- 1. Doris has 24 jacks. She gave \(\frac{1}{3}\) of them to Ruth. How many did she give to Ruth?
- 2. Sister has 27 pens in 3 boxes. How many has she in each box?
- 3. Father bought a pencil box for each of his 3 children. If the boxes are 30 cents apiece, how much did they cost?
- 4. Peter went fishing. Each week he caught 23 fish. How many did he catch in 3 weeks?
- 5. In our room there are 24 desks in 3 rows. How many desks are there in each row?

Test 9

- 1. Ellen made 24 paper dolls. She gave away $\frac{1}{3}$ of them. How many did she give away?
- 2. In one quart there are 2 pints. How many pints are there in 9 quarts?
- 3. Tom had 29 marbles. He won 12 more. How many had he then?
- 4. Mary has 32 jacks. Jean has 41. How many more jacks has Jean than Mary?
- 5. Ann put 27 little cakes on 3 plates. On each plate she put the same number of cakes. How many did she put on each plate?

Test 10

- 1. How much less than 93 cents is 59 cents?
- 2. How much more than 75 cents is 81 cents?
- 3. Nick bought a jar of paste for 12 cents, a picture book for 25 cents, and a box of crayons for 15 cents. How much did they all cost?
- 4. Grace has 18 gold stars in one copy book and 15 in another. How many gold stars has Grace?
- 5. Write four hundred twenty-five in figures.

Test 11

- 1. Jean made 20 paper hats. If \(\frac{1}{4} \) of them were pink, how many were pink?
- 2. In 1 foot there are 12 inches. How many inches are there in 4 feet?
- 3. Joan paid 40 cents for 4 marking pencils. How much did each one cost?
- 4. A yard of ribbon costs 19 cents. What must I pay for 4 yards?
- 5. 36 airplanes left the airport in 4 groups. How many were there in each group?

- 1. At a party 4 boys ate 28 pieces of candy. How many pieces did each boy eat?
- 2. Mr. Cook bought a box of blocks for each of his 3 sons. If there were 64 blocks in each box, how many blocks did Mr. Cook buy?
- 3. Tom saw 4 groups of planes in the sky. In each group there were 18 planes. How many planes did Tom see?
- 4. Mr. Burns paid 36 cents for 4 cigars. How much did he pay for 1 cigar?
- 5. Mother had 36 cookies. She divided them equally among her 4 children. How many cookies did she give to each child?

Test 13

- 1. Nancy had 45 colored beads. She lost 18 of them. How many had she left?
- 2. Write six hundred seventy-one in figures.
- 3. Mary saved 24 cents one week and 19 cents the next week. How much did she save in two weeks?
- **4.** Tom has 79 cents. How much more does he need to buy a drum that will cost 90 cents?
- 5. In our room there are 42 children. In the other third grade there are 39 children. How many children are in the two rooms?

Test 14

- 1. How many 5-cent cakes can I buy for 45 cents?
- 2. Paul has 16 cents. His brother has 5 times as much. How much does his brother have?
- 3. Dad worked 40 hours in 5 days. How many hours did he work each day?
- 4. There are 35 children in our room. They are seated in 5 rows. How many are there in each row?
- **5.** David delivers 42 papers each day. How many does he deliver in 5 days?

Test 15

- 1. Farmer Jones had 9 black cows, 18 brown cows, and 34 white cows. How many cows did he have in all?
- 2. There are 12 inches in 1 foot. How many inches are there in 5 feet?
- 3. Rose weighs 43 pounds. Mary Ellen weighs 37 pounds. How many more pounds than Mary Ellen does Rose weigh?
- 4. Tom's father paid 18 cents a gallon for gas. How much would he pay for 5 gallons?
- 5. John bought 40 marbles. In a game he lost ½ of them. How many marbles did John lose?

Test 16

- 1. Carol had 36 cents. She spent 19 cents. How much has she left?
- 2. Fred's father drove his car 165 miles one day and 109 miles the next day. How many miles did he drive in the two days?
- 3. Last week Frank sold 77 papers. Dick sold 92 papers. How many more than Frank did Dick sell?
- 4. What is the difference between 83 and 68?
- 5. Mary Ellen has 17 buttons on one dress and 15 on another dress. How many buttons has she on the two dresses?

Test 17

- 1. Bill saw 54 soldiers marching 6 in a row. How many rows were there?
- 2. A farmer had 60 sheep. He sold \(\frac{1}{6} \) of them. How many did he sell?
- 3. At 16 cents each, what will 8 toys cost?
- 4. How many 6-cent candy bars can Rose buy for 42 cents?
- 5. In the third grade, 8 of the boys have read 6 books each. How many books have they read?

- 1. Jerry bought 6 toys at 15 cents each. How much did he pay for them?
- 2. How many pints are there in 12 quarts if there are 2 pints in 1 quart?
- 3. How much less than 62 cents is 43 cents?
- 4. Aunt Sally baked 42 cookies. The boys ate 25 of them. How many cookies were left?
- 5. Dick read 38 pages of a book one day and 28 pages the next day. How many pages did he read?

Test 19

- 1. Larry's father planted 48 trees. If $\frac{1}{6}$ of them are pear trees, how many are pear trees?
- 2. Betty has 6 bags of gumdrops. There are 16 gumdrops in each bag. How many gumdrops has Betty?
- 3. There are 12 oranges in 1 dozen. How many are there in 6 dozen?
- 4. How many 6-cent whistles can I buy for 30 cents?
- 5. Sister paid 54 cents for 6 copy books. How much did each book cost?

Test 20

- 1. Sally had 72 cents in her bank. She spent 16 cents for a yard of ribbon. How much had she left?
- 2. Sister has 6 packs of drawing paper. There are 25 sheets in each pack. How many sheets of paper has Sister?
- 3. Mother has 12 cupcakes for Dan's party. There will be 6 boys at the party. How many cakes can Mother give to each boy?
- 4. May has 42 cents. She spends ¹/₆ of it. How much does May spend?
- 5. There are 137 children in one school and 138 in another. How many children are there in the two schools?

Test 21

- 1. Mr. Smith had 35 stamps. He divided them equally among 7 boys. How many did he give to each boy?
- 2. Our teacher had 13 boxes of pencils. Each box had 7 pencils in it. How many pencils had she altogether?
- 3. Candy toys are 15 cents each. How much must Jim pay for 7?
- 4. A cook uses 14 quarts of milk a day. How many quarts will she use in 7 days?
- 5. How many 7-cent toys can Patty buy for 28 cents?

Test 22

- 1. At 6 cents each, what must Don pay for 7 candy canes?
- 2. Betty's mother bought 7 yards of lace at 19 cents a yard. How much did the lace cost?
- 3. At 7 cents each, how many medals can Jean buy for 56 cents?
- 4. Helen saves 7 cents each week. How many weeks will it take her to save 70 cents?
- 5. Each page in Nancy's stamp book holds 7 stamps. How many pages must she use for 63 stamps?

Test 23

- 1. Ann is 54 inches tall. Her sister, Marie, is 63 inches tall. How many inches taller than Ann is Marie?
- 2. May is buying favors for the table. Each will cost 7 cents. If May has 70 cents, how many favors can she buy?
- 3. Milk is 18 cents a quart. How much must Joe's mother pay for 7 quarts?
- 4. There are 42 candy canes in a box. If Mother divides them equally among 7 children, how many will she give to each?
- 5. Ben's mother paid 29 cents for lemons, 36 cents for oranges, and 31 cents for potatoes. How much did she pay for all?

- 1. Betty spends 15 cents each day for lunch. How much will she spend in 8 days?
- Bobby sells 24 papers every day. How many will he sell in 8 days?
- 3. For the party, Madge put 32 sugar cookies on 8 plates. How many did she put on each plate?
- 4. The baker made 40 pies today. If $\frac{1}{8}$ of them are apple pies, how many are apple pies?
- 5. Ned has 31 marbles. Billy has 8 times as many. How many marbles has Billy?

Test 25

- 1. Fred weighs 62 pounds. Harry weighs 57 pounds. How much less than Fred does Harry weigh?
- 2. Farmer Green had 184 sheep in one field and 259 in another field. How many sheep had he in all?
- 3. Tommy had \$1.95. He spent \$.78. How much had he left?
- 4. Larry earned \$.35 last week and \$.47 this week. How much did he earn in the two weeks?
- 5. Ellen picked 32 flowers and Janet picked 29 flowers. How many fewer flowers than Ellen did Janet pick?

Test 26

- 1. Mr. Hill's cows gave 36 quarts of milk in 1 day. How much did they give in 9 days?
- 2. Find the cost of 9 baskets of apples at \$1.34 a basket.
- 3. Mother divided 27 cookies equally among her 3 children. How many did she give to each?
- 4. Patty had 27 cherries. She gave \(\frac{1}{9} \) of them to Rose Marie. How many did she give to Rose Marie?
- 5. Nancy put 15 crayons in each box. How many did she put in 9 boxes?

Test 27

- 1. What is the difference between \$3.75 and \$5.21?
- 2. Larry's father bought a 9-pound turkey. He paid \$.72 a pound for it. How much did the turkey cost?
- 3. Sam paid 81 cents for toys. He paid 9 cents each for them. How many toys did he buy?
- 4. Mother bought 9 Easter lilies for the altar. Each lily cost \$.60. How much did Mother pay for them?
- 5. In our room we are making picture books. The boys have 127 pictures and the girls have 98. How many pictures have we altogether?

Test 28

- 1. Jerry has \$3.68. How much more does he need before he will have \$5.03?
- 2. Chairs are \$5.86 each. How much must Larry's father pay for 7 of them?
- 3. Ellen had \$4.53 in the bank. She put in \$1.69. How much had she then in the bank?
- 4. Mother spent \$1.45 for meat, and \$.95 for butter. How much did she pay for both?
- 5. There are 16 ounces in 1 pound. How many ounces are there in $\frac{1}{8}$ of a pound?

Test 29

- 1. Mother bought potatoes for \$.65, apples for \$.36, and oranges for \$.42. How much did she spend altogether?
- 2. There are 12 inches in 1 foot. How many inches are there in \(\frac{1}{4} \) of a foot?
- 3. Larry's uncle bought 5 books. He paid \$1.35 for each book. How much did they cost?
- 4. Billy went on a train with his father. Billy's ticket cost \$3.48. His father's ticket cost \$6.96. How much did they both cost?
- 5. How much less than \$6.00 is \$4.34?

- 1. Betty has saved \$6.04. Her sister Ann has saved \$4.89. How much less than Betty has Ann?
- 2. In one gallon there are 4 quarts. How many quarts are there in 7 gallons?
- 3. If one drum costs \$5.60, what will 4 drums cost?
- 4. May had 32 jacks. She gave $\frac{1}{8}$ of them to Alice. How many jacks did she give to Alice?
- 5. If Helen has 9 cents, how many 2-cent taffies can she buy? How much will she have over?

How Well Do You Remember?

1. When we add, our answer is called the $\ ?$.

2. When we divide, our answer is called the ? .
3. When we multiply, our answer is called the ? .
4. When we subtract, our answer is called the ? .
5. To find the sum, we ? .
6. To find the product, we ? .
7. To find the quotient, we ? .
8. To find the difference, we ? .
9. To find how much more one number is than another, we ? .
10. To find how much less one number is than another, we ? .
11. To find $\frac{1}{7}$ of a number, we ? the number by seven.
12. When we know the cost of one thing and we want to find the cost of two or more things of the same kind, we ? .
13. Mother knows the cost of one dress. What must she do to find the cost of 4 dresses?
14. When we know the cost of two or more things of the same kind and we want to find the cost of one thing, we ? .

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- 15. Father knows how much he must pay for 8 story books of the same kind. How will he find the cost of one?
- 16. When we know how many things are in one group and we want to find how many things are in two or more groups of the same kind, we?
- 17. Paul knows there are 6 eggs in each nest. To find how many eggs there are in 3 nests, he must?
- 18. When we know how many things are in two or more groups and we want to know how many things are in one group, we?
- 19. Nancy knows there are 24 desks in 4 rows. To find how many desks there are in one row, she must?
- 20. John knows the cost of a book and a pencil. What must he do to find the cost of both?
- 21. I want to know how much change I will get from 75 cents if I spend 60 cents. What must I do to find out?
- 22. To change a larger measure to a smaller measure, I must ?
- 23. To change a smaller measure to a larger measure, I must ?
- 24. When we add, our answer is always ? than any of the numbers we add.
- 25. When we subtract, our answer is always ? than the number we subtract from.
- 26. When we add zero to any number, our answer is the same as the ?
- 7. When we subtract zero from any number, we still have the same ?
- 8. When we multiply zero by any number, our product is ?

How Well Do You Remember?

COUNTING



12 things = 1 dozen

doz. means dozen or dozens

WEIGHT

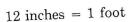


16 ounces = 1 pound

oz. means ounce or ounces

lb. means pound or pounds

LENGTH



3 feet = 1 yard

36 inches = 1 yard

in. means inch or inches

ft. means foot or feet

yd. means yard or yards

LIQUID



2 pints = 1 quart

4 quarts = 1 gallon

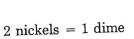
pt. means pint or pints

qt. means quart or quarts

gal. means gallon or gallons

UNITED STATES MONEY





10 cents = 1 dime

5 cents

= 1 nickel

10 dimes = 1 dollar

ROMAN NUMBERS

TIME

т					
1	=	1	XI	=	11

$$II = 2 XII = 12$$

$$III = 3$$
 $XIII = 13$

$$IV = 4$$
 $XIV = 14$

$$V = 5 XV = 15$$

$$VI = 6$$
 $XVI = 16$

$$VII = 7$$
 $XVII = 17$

$$IX = 9 XIX = 19$$

$$X = 10 \qquad XX = 20$$

$$XXI = 21$$
 $XXXI = 31$

$$XXII = 22$$
 $XXXII = 32$

$$XXIII = 23$$
 $XXXIII = 33$

$$XXIV = 24$$
 $XXXIV = 34$

$$XXV = 25$$
 $XXXV = 35$

$$XXVI = 26$$
 $XXXVI = 36$

$$XXVII = 27$$
 $XXXVII = 37$

$$XXIX = 29$$
 $XXXIX = 39$

$$XXX = 30 XL = 40$$

$$XLI = 41$$
 $XLVI = 46$

$$XLII = 42$$
 $XLVII = 47$

$$XLIV = 44$$
 $XLIX = 49$

$$XLV = 45 \qquad \qquad L = 50$$

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

7 days = 1 week

4 weeks = 1 month

12 months = 1 year



sec. means second or seconds

min. means minute or minutes

hr. means hour or hours

da. means day or days

wk. means week or weeks

mo. means month or months

yr. means year or years

, E

